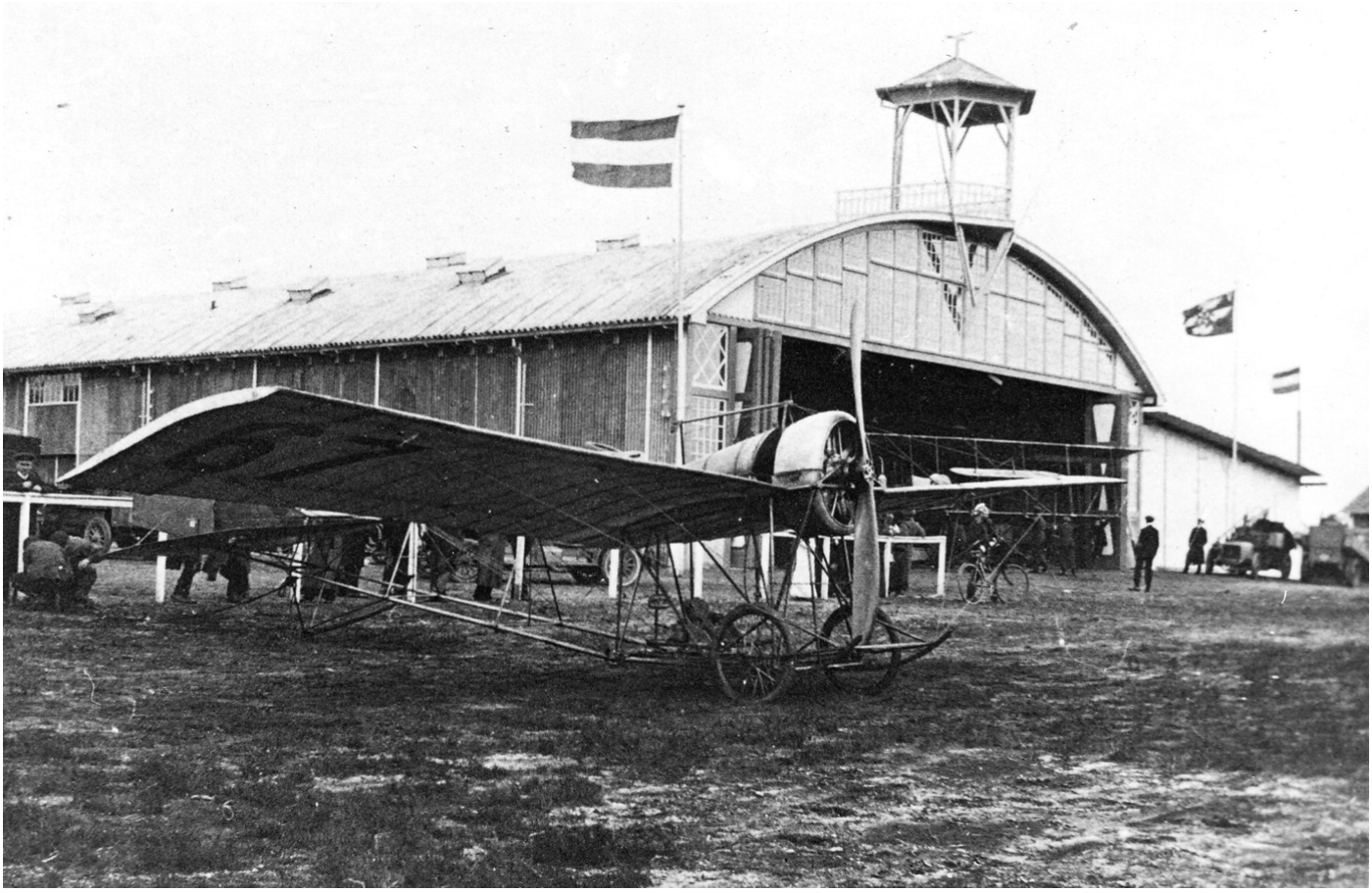
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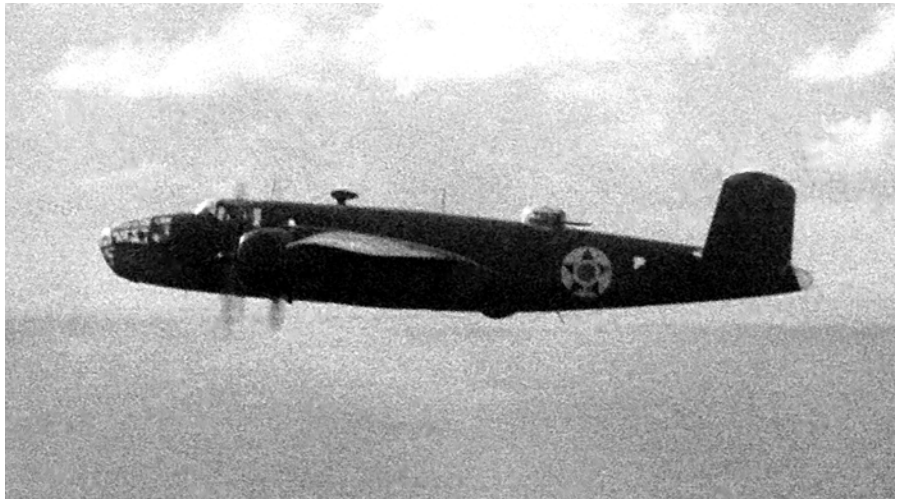
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Dutch Pre-WWI Military Aviation
Spanish Boeing Peashooter: Part 2
Brazilian North American B-25B

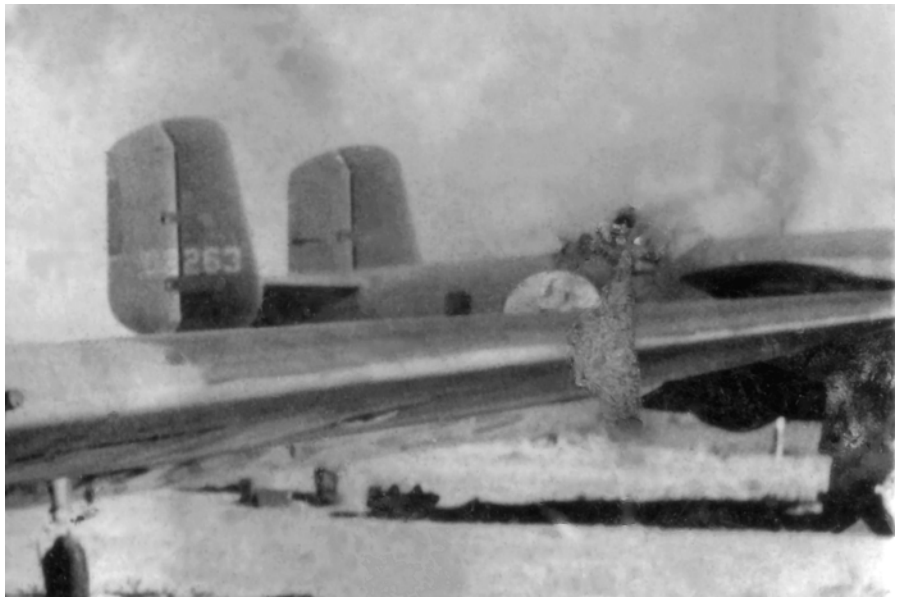
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Brazilian North American B-25Bs.

See article on page 101.

SMALL AIR FORCES OBSERVER

The Journal of the Small Air Forces Clearinghouse

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COVER COMMENTS:
The first part of the history of Dutch military aviation before WWI begins on page 88 in this issue. The photo on the cover shows the "factory" at Soesterberg with Emil Louis Train's monoplane in front during the European Tour of 1911. Note the race number '67' under the starboard wing. (Photo via the author)

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[Editor's Note: For more information on Brazilian B-25 attacks on German U-Boats, check out the Website, História da Força Aérea Brasileira: http://www.rudnei.cunha.nom.br/FAB/en/index.html. On the home page, select English, choose Aircraft, and then Patrol. The following is an excerpt from this Website.]

"The first attack on German U-boat by a Brazilian crew was on 22 May 1942. A B-25 Mitchell from the Aviões de Adaptação (Aircraft Adaptation Group) based at Fortaleza was on patrol near Fernando de Noronha archipelago and the 'Rocas' atoll, where two day earlier the Brazilian merchant ship "Comandante Lyra" had been sunk by the Italian submarine "Barbarigo".

"At 1400 hours, the B-25 crew – under the command of Cap-Av Parreiras Horat (FAB).and including Cap-Av Pamplona (FAB), 1st Lt Schwane (USAAF), Sgt Yates (USAAF), S/Sgt. Tyler (USAAF).and S/Sgt Robinson (USAAF) found a surfaced submarine which immediately started to shoot at the Brazilian airplane with it's AA guns.

"As Brazil was still neutral, the rules of engagement dictated that only after being attacked could the Brazilian crews respond. Accordingly, the Mitchell crew launched its load of depth charges which fell close to the submarine.

"Five days after this attack, two other Brazilian B-25s from the same unit made attacks on German submarines. Then, in August 1942, the German submarine U-507 sank six ships with the lose of 877 persons. As a consequence, on 22 August 1942, the Brazilian government declared war on Germany and Italy."

-abstracts-abstracts-abstracts-abstracts-abstracts-abstracts-abstracts-abstracts-abstracts-

AUSTRIA

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FRANCE

AVIONS: Toute l'Aeronautique et son Histoire (Lela Presse, 29 rue Paul Bert, 62230 Outreau, France. 71 euro for 6 issues). Website: www.avions-bateaux.com. E-mail: contact@avions-bayeaux.com.

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GERMANY

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FINNISH SWEDISH SIG, Entirely in English. Available on the Internet from nrtreichel@vr-web.de.#32 "A Barrel of Laughs" building NeOmega's 1/48-scale Saab 29 J29F 'Tunnan'. "The Saab Lansen J 32Snö" converting the Lansen into a snow clearing machine.

ITALY

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Agosto 2013 (100 pages) Color photo: Mauritania Super Tacano. "Incidenti Militari" one pages inc. 5 photos.

Settrmbre 2013 (100 pages) Photos: Camaroon CN-235 & India Pilatus PC-7. "Anatolian Eagle 2013-2" 6 pages inc. 7 photos (Turkish F-4 & F-16; UAE F-16 & Boeing C-17; and Saudi F-15). "Linga vita ai MiG-21 croati" 6 pages inc. 5 photos and an excellent English-language history of the MiG-21 in Croatia. "Incidenti Militari" 1 pages inc. 4 photos (Venezuela Hongdu K-8W).

USA

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#3 (24 pages) "Relief Organizations of Iran: Red Lion and Sun Society 1928-1979" 2 pages inc. 7 photos. "Red Crescent Society of Iran 1979-Current" 2 pages inc. 9 photos. "Sukhoi Su24MK" 10 pages on the technical details and operational history of the Iranian (and ex-Iraqi) Fencer-D inc. 28 photos and 3 color profiles. "Timeline of Aviation in Iran: The French Connection" Potez-8 (one page inc. 2 photos and a color profile); Breguet 14 (one page inc. 3 photos and a color profile); Spad S-42 (one page inc. one photos and a color profile); and The Paris-Tehran flight (Breguet 19; one page inc. 5 photos and a color profile). "Iranian Airways: Iran's first true airline: 1946-1962" 3 pages inc. 6 photos and 3 color profiles (C-47, CV-240, & C-54).

The Spanish Boeing: The untold story

Part 2

Alfredo Logoluso

The Boeing is absent from the skies

According to a report signed by the Soviet Air Adviser in Republican Spain, Komdiv A. I. Bergolhts and fighter pilot Starshij Lejtenant E.E. Erlhikin; at the end September 1936, there were 18 serviceable fighter aircraft at Madrid-Getafe: 9 Nieuports (Ni-H 52), 4 Dewoitines (D.37), 2 Loires (46), 1 SPAD (510), 1 Boeing (Model 281), 1 Avia (BH 33 probably unarmed for training), but with only 11 available fighter pilots: 6 Spaniards, 3 Russians, 2 Frenchmen. Also available were 18 bombers: 14 Breguets (Bre 19), 2 Potez (54), 2 Douglas (armed DC2 from LAPE's commercial fleet). Between mid September and October 1936, Erlhikin flew 70 hours on 16 different aircraft types, probably including testing the Boeing fighter.

During the first half of October, there were no reported encounters with the Boeing monoplane by Nationalist airmen. Maybe the Model 281 was under repair after damage suffered by accident or due to enemy aerial bombing. Indeed, on the night of 3 October, a successful raid was carried out against Getafe airbase by two Ju 52/3m bombers (probably flown by German crews), destroying on the ground nine Republican aircraft, likely all the serviceable Ni-H 52 fighters, as reported by Gavrijl Prokofjev who serving with the "Escuadra Internacional" as a navigator on bombers. Possibly, more fighters parked nearby were also damaged that same night, including the Boeing monoplane.

Beginning in October 1936, the American pilot, Eugene Finick, engaged by the Spanish Republic the month before, had reached Madrid and entered the "Escuadra Internacional" at Getafe. He started as a gunner in Breguet 19s light bombers on the Toledo front. Remembering aircraft then available, Finick wrote in 1937: "... we had a five-year-old Boeing fighter on which they could never synchronize the guns. It always came back with its own propeller shot full of holes. Lacalle -... he's the greatest ace the Spaniards have turned out... - flew the rattletrap old Boeing...." This description has misled some researchers because Finick wrongly identified as a "Boeing" the fighter flown by Lacalle in October 1936. It was actually one of the Hawker-Hispano "Fury". Actually, it was the Spanish "Fury" that had problems with its machinegun synchronization device. According to Lacalle, he flew the "Fury" and Puparelli flew the "Boeing". Moreover, the Boeing monoplane was not five years old in 1936, but first-production "Furys" were. After Finick's articles were published in the USA, guns synchronization troubles suffered by the Spanish "Fury" were wrongly ascribed to the Boeing Model 281 by some writers up to recent times.

In the middle of October, the Boeing monoplane joined the Malraux "Escuadra España" on the Madrid front where this "international" air unit had been operating mainly from Barajas. Since September, it had lost most of its French-designed fighter aircraft, mainly Ni-H 52s and Dewoitine D.37s shot down by CR.32s of the "Aviación de el Tercio". Model 281 was assigned to French mercenary pilot Jean Labitte, an airman engaged by the Spanish Republican Government in August 1936. According to Captain Victor Veniel, a French pilot the "Armée de l'Air" and third-in-command of "Escuadra España" after André Malraux and Abel Guides, Labitte overturned the Boeing monoplane on his first landing in it without any serious injuries. The French pilot was saved by the efficient headrest and the aircraft suffered only minor damage thanks to its structural strength. It was rapidly repaired and made serviceable within few days, being returned to a Spanish manned unit and flown again by commander Puparelli.

"Boeing", "Fury", or Rata"

Soon, the Boeing monoplane fighter was seen again on the central front. Italian Colonnello Ruggero Bonomi, commander of the "Aviación de el Tercio", wrote in his war diary on 19 October 1936: "A new type of fighter aircraft has been noticed on the Madrid front, I think it could be Russian...." This assumption, three weeks before the first I-16 fighters appeared over Madrid, is probably the origin of Nationalist's trend to identify the Soviet monoplane fighter as a "Boeing" type built under license or copied by the USSR. This, notwithstanding that an I-16 had been

statically presented in Italy, at the Milan Exhibition of 1935, showing its cantilever wing structure and retractable undercarriage. The Boeing Model 281 was clearly a different aircraft - apart from the engine - with its externally-braced wing and fixed undercarriage. As a consequence, during Spanish Civil War both Nationalists and their foreign allies, Italians and Germans, often described the I-16 as a "Boeing" both in official and operational documents. However, their most used name for the Soviet monoplane fighter remained "Rata". The same happened with the Nationalist name for the Soviet SB twin-engine monoplane bomber, that was called a "Martin Bomber" after its resemblance to the Martin B-10, and because a negotiation for the purchase of these American bombers was in progress between the Spanish Republican Government and the Glenn Martin Company when the military revolt in Spain started. Finally, an American Curtiss "Hawk" biplane fighter was also reported as ready for evaluation in Spain before the civil war, thus accounting for Nationalist name "Curtiss" later given to the Soviet I-15 biplane fighter sent to Republican Spain in October 1936.

According to South African ex-RAF Flight Lieutenant Vincent P.J.G. Doherty O'Loughlin, who was engaged to fly for the Spanish Republic and was serving with the "Escuadra Internacional" at Getafe in September of 1936, on 20 October there were still available near Madrid 4 Dewoitine 37s, 1 "Fury", 1 Loire, 1 Boeing, 3 Nieuport fighters; and 4 Potez 54s and 1 Bloch 200 twin-engine bombers, along with 1 Junkers and 1 Douglas transports armed and converted into bombers (nine Soviet-produced fighters of an unknown type were also mistakenly reported as also present). Doherty served as a fighter pilot with the rank of Captain on the Toledo front where, while flying a Dewoitine D.37, he was seriously wounded by a 7.7 mm bullet in his left shoulder and another in his left leg, in combat against a FIAT CR.32. The Dewoitine returned to Getafe with about 50 bullets holes in its fuselage. This engagement likely happened on 25 September, the enemy pilot being Italian ace-to-be Guido Presel who claimed on that occasion his first two air victories. After more than two weeks to recover, Doherty returned to England and visited the Air Ministry in London on 28 October, where he reported on his operations with the Spanish Republican Air Force and listed the aircraft types then available. The transcript of his interview being archived by British Foreign Office in FO 371 File (1936) 20547. (Research by B. Bridgeman, "The Fliers", self-published, 1989). Both a "Fury" and a Boeing were reported. Evidently there was no confusion between the two types (as happened in Finick's press report) and Doherty's reference obviously refers to Model 281 fighter still serviceable on the Madrid front.

Fiats vs. Breguets

By end October 1936, a series of occasionally correlated events signaled the final fate for the lone Spanish Boeing fighter. First, 30 Soviet SB twin-engine bombers had been unloaded at Cartagena by the third week of the month, rapidly assembled to form three air-units within the so-called Grupo No. 12 and based on three different airfields in northern Murcia. From here, they began an immediate bombing offensive against Nationalist airbases and enemy aircraft on the ground.

At that time, the Nationalist fighter force consisted of two CR.32 "Escuadrillas de Caza" of "Aviación de el Tercio" under the overall command of Capitano Dequal and based near Talavera de la Reína operating in the south-western sector of the Madrid front. A third CR.32 Escuadrilla was being prepared at Seville-Tablada air-base in Andalucia, with Capitano Maccagno as commander. One patrol of CR.32s was detached from Seville to Granada airfield for local air defense. Daily, a patrol of three CR.32s was detached from Talavera to Avila airfield, where a main force of Ju 52 bombers and He 51 fighters with German crews was based, covering the north-western sector of the Madrid front.

On the evening of 27 October, after five days without any encounters between Nationalist and Republican airplanes near Madrid, a CR.32 patrol detached at Avila, led by ace Sottotenente Adriano Mantelli with wingmen Sergente Maggiore Tullio Serafini, and Sergente Raul Galli, was flying back to Talavera when the Italians came upon a formation of five enemy Breguet 19s in action near Peguerinos – without fighter escort. These Republican light bombers came from the last Breguet unit still operating on Madrid front, the "Escuadrilla González", led by Capitán Julio González Martín and based at Alcalá de Henares airport. The Breguets had been sent unescorted over the front after an urgent

order given directly by Navy and Air Minister Indalecio Prieto, to attack Nationalist troops of General Mola's 7th Division menacing Republican positions held by Comandante Niceto Rubio at Peguerinos. Since no fighters available to protect the Breguets, the five Republican crews had been formed by volunteer personnel - five Spanish pilots, recently trained apart their leader, with four Spanish and a Mexican machine gunner.

As soon as Republican airmen took aim at their target on the front along the Sierra de Malagón, the CR.32 patrol approached from out of the sun to intercept the enemy formation. The Breguets hastily unloaded their sixty 12 kg "Hispania" A5 bombs on Nationalist vanguards and turned east towards their base, but were soon overtaken by the faster fighters. As a first and unusual circumstance in Spain, all the aircraft involved were camouflaged. The Breguets had large ochre-yellow and olive-green irregular patches applied on all upper-surfaces. Until then, they had flown in their prewar overall silver finish. Two months earlier, the CR.32s had adopted a camouflage obtained by shaded reddish-brown narrow mottles on sand-yellow painted upper and side-surfaces.

Four of the Breguets, with their leader, turned right, and entered a steep dive, while the fifth bomber, occupying the far left side of the formation and initially distanced from the others, turned left instead, diving too, initially followed by the whole CR.32 patrol.

The isolated Breguet was then attacked from behind in turn by the three fighters. The Spanish pilot dived low to prevent the CR.32s from firing from below and out of sight of his tail gunner - the young and fresh trained José Ramos Miraut, who later recalled: “... my machinegun malfunctioned; after firing the first shot, it continued firing when I released the trigger, until stopping by its self. In these conditions, as soon as I had the target in my sights, I opened fire as a man condemned to death who wanted to live, and although I had stopped pressing the trigger, I followed the target with my gun until it disappeared out of sight....” One of the bullets from 7.69 mm bullet from Ramos' Vickers model K machinegun had cut an aileron control cable on Galli's CR.32, forcing the Italian pilot to break off his attack. Galli was able to skillfully fly his CR.32 for 40 kilometers and safely land at Avila notwithstanding the serious damage to his controls. Meantime, Mantelli and Serafini continued their attack on the isolated Breguet. The Spanish his pilot diving and maneuvering so violently that Ramos' machinegun broke off its bracket and fell out of the aircraft. As remembered by Ramos: “Bullets surrounded us everywhere; the oil-cooler had been perforated and I was covered in oil and my goggles were broken. I continuously called Alvarito; but he didn't answer. Thinking he might be dead in the cockpit, I bailed out by parachute without knowing where I was....”. However, the pilot had not been killed and his Breguet was abandoned by the pursuing CR.32s that went off to intercept the other four aircraft of the Republican formation. He returned to Alcalá de Henares airbase, although heavily damaged and without its missing gunner. The gunner, Ramos, landed near the left bank of the Aulencia River and was initially keep in custody at El Escorial by a squad of militiamen who suspected he was Nationalist pilot. He was later freed by a Republican Army Medical Captain.

Meanwhile, while attacking the bulk of the Republican formation, patrol leader Mantelli shot down a Breguet that was seen to fall in flames behind the Nationalist lines. This was probably the aircraft flown by the unit commander González Martín who was killed along with his gunner. This was the seventh individual victory claimed by Mantelli, known as the first Italian fighter ace in Spain. Following the remaining Breguets eastward, with the sun at their backs, the Italian pilots were in a favorable position because the gunners defending the Breguets had their aim disturbed by the sun low on the horizon and straight into their eyes. Attacking together, Mantelli and Serafini shot down in succession the other three Breguets of the flight. The Republican aircraft were all shot down by light 7.7 mm bullets: no CR.32 delivered to Spain being then armed with the heavier 12.7 mm machinegun. One Breguet fell to the ground killing both its crew-members, and two crash landed in Republican territory near El Escorial, both crews saving their lives: pilot José María Romero Fernández with gunner Augusto Lecha Vilasuso, who were both with the "Aeronáutica Naval" at the beginning the civil war, and pilot Vicente Valls Llop wounded with gunner Leopoldo Morquillas Rubio uninjured, both were with the "Aviación Militar" on July 1936.

Later, Romero became leader of RZ light bombers 1a Escuadrilla of Grupo 25 in 1937 and commander of RZ Grupo 30 in 1938; Lecha became an I-15 fighter pilot in 1937 and Dewoitine D.37 1a Escuadrilla leader in 1938, within Grupo 71 of coastal defense. Morquillas became an I-15 fighter pilot and Escuadrilla leader in the "Región Aérea del Norte" on the Cantabrian front in 1937, then CO of 2a Escuadrilla within Grupo 26 in 1937 and 1938. As a machinegun gunner during 1936, Morquillas was shot down three times, always by CR.32s and with no crewmembers killed: on 22 September in a Breguet 19 flown by Teniente Crescencio Ramos Pérez between Talavera de la Reína and Maqueda, hit by Italian Escuadrilla leader Cap. Dequal; on 26 September in a twin-engine Potez 540 bomber flown by Teniente Gumersindo Areán Rodríguez shot down near Bargas, with five out of eight crew-members wounded, hit by both Sottotenente Mantelli and Sottotenente Cenni; finally on 27 October near El Escorial, again shot-down by Sottotenente Mantelli and Sergente Serafini. A fighter pilot since the beginning of 1937, Morquillas was later credited as one of Republican top aces, claiming 21 individual and shared victories (confirmed or probable). When civil war in Spain ended, he went to the USSR where he flew with the VVS during the Second World War initially as the leader of an Il-2 Assault Squadron and then as an Air Division Inspector.

Mantelli and Serafini, with four more confirmed victories to their credit, individual or shared, finally landed at Talavera de la Reína as related earlier.

During the next three days, Galli remained at Avila, while his CR.32 was being repaired. Meanwhile, the first SB bombers begun their planned air offensive, ordered by Soviet General Yakob Smushkevich alias "Andre Douglas", attacking Nationalist airbases at Caceres, Seville, Salamanca and Talavera de la Reína.

The end of the Spanish Boeing

By the morning of 30 October, Galli had his CR.32 ready to go back to Talavera, but his intervention was immediately required because a patrol of three enemy bombers flying deep into Nationalist territory towards Salamanca had been just pointed out. As reported later, three SBs bombed Matacán airport that morning. Avoiding a likely fruitless pursuit north-west towards Salamanca, Galli flew north-east to intercept the intruders on their probable return route over the Sierra de Guadarrama. Soon the Italian pilot spotted the enemy patrol flying east and chased it as it was approaching Republican lines. Busy at his pursuit and unwary, Galli didn't notice the lone Boeing fighter, flown by Puparelli, who was cruising above the Sierra de Guadarrama front. Puparelli attacked the CR.32 from behind. An accurate burst by Puparelli's machineguns struck the FIAT fighter, a bullet skimming Galli's head and shattering the windscreen, but fortunately for the careless pilot, nothing vital was hit on either man or machine. Recovering from the unpleasant surprise, Galli carried out a successful evasion maneuver and engaged in a keen air duel with the Boeing monoplane, while the SB bombers went away undisturbed.

This aerial duel involved two skilled and experienced pilots, and was only decided by the strength and maneuverability of the nimble CR.32. The FIAT survived the first burst by the American fighter and then out turned the Boeing monoplane. After his first inconclusive attack, Puparelli didn't run away - exploiting the higher horizontal speed of his aircraft - but made the mistake of facing the CR.32 in a dogfight. (The same tactical mistake was committed later in Spain by several I-16 pilots.) After a tight turn, Galli was able to reverse positions, easily getting on the Boeing’s tail. He fired his two 7.7 mm guns seriously damaging his enemy’s aircraft. Puparelli was not wounded, bailing out at high speed, he had a rib broken by the violent pull on the harness when his parachute opened. Come down on Republican territory near the city of Torrelaguna, about 25 miles north Madrid, Puparelli was recovered and hospitalized. Model 281 was destroyed beyond repair when it crashed to the ground out of control.With his aircraft damaged, Galli went back to Avila aerodrome, where his CR.32 was repaired once again.

Many years after the civil war, Lacalle reported that the Boeing monoplane was shot down near Getafe, so that some writer wrongly supposed the event happened on 21 October, when CR.32s fought against Republican fighters near and above that main airbase. On that occasion, Italian pilots reported they had seen a monoplane fighter retreating towards Madrid, identified as a Dewoitine D.500, quite unlike the American Model 281. The Italians claimed two fighters; a Loire and a SPAD, as shot-down.

Ramón Puparelli recovered from his fracture and spent medical convalescence between the end of October 1936 and beginning January 1937. He was unable to participate in the defense of Madrid which was assumed mainly by just-arrived Soviet fighters and pilots, together with some Spanish airmen assigned to first I-15 units.

Relieved from first-line service, Puparelli remained temporarily in reserve until being sent to the "Estado Mayor" of the Republican "Fuerzas del Aire". Later he was assigned as fighter-units commander of the Republican "Fuerzas Aéreas del Norte" and transferred to Santander beginning June. Promoted to the rank of Mayor de Aviación on 24 August 1937, and back in central Spain Puparelli took command of the I-15-equipped Grupo 26. Later in October 1937 he became commander of "Escuadra No. 11 de Caza", until February 1938 when he was replaced by Mayor Luis Alonso Vega. Remaining in service within the "Jefatura de la Escuadra de Caza", Puparelli was promoted to the rank of Teniente Coronel on 14 December 1938, while in Catalonia. He survived the Spanish Civil War and passed away many years later.

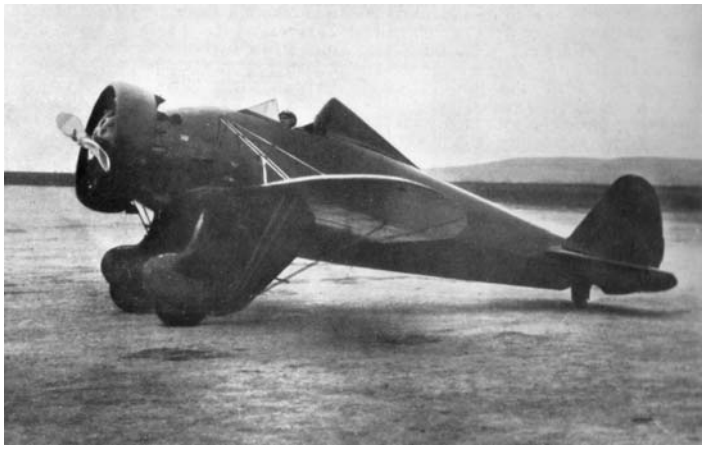
Epilog

After the lone American monoplane had ended its short and somewhat hidden service life, destroyed in the fertile countryside of Torrelaguna, the Spanish Republic Ambassador in Paris, Luis Araquistain Quevedo, authorized a payment of 26,000 dollars for the lost aircraft. This was a little more than 25 percent of the unit price initially asked, commissions inclusive. Money was withdrawn from a financial fund at disposition of Spanish Republican "Oficina de Compras" in Paris, a hidden office entrusted with special war purchases. It was paid to a Boeing Company representative, Wilbur Johnson, who presented himself with diplomatic credentials through the USA Ambassador in France.

Exactly one year before the loss of the Boeing fighter (30 October 1935), the man who demonstrated it in Spain, chief test-pilot Les Tower, lost his life in the USA while testing the prototype B-17 four-engine bombers, when the Boeing Model 299, then only three-months-old and still experimental "Flying Fortress", stalled soon after take-off and caught fire. An inquiry established that the cause was a human mistake ascribed to the pilot's controls having been left inadvertently locked.

In Spain, the "Boeing fighter" continued to fly until the end of Civil War in 1939, confused by Nationalists and, sometimes even by Republicans, with the Soviet monoplane fighter I-16 that was powered by the same American engine as the one fitted to that unique Spanish "true" Boeing.□

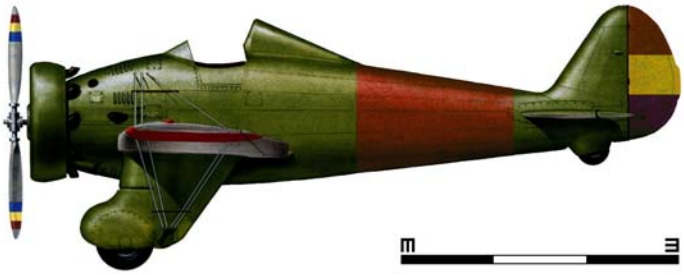
Alfredo Logoluso, Italy.

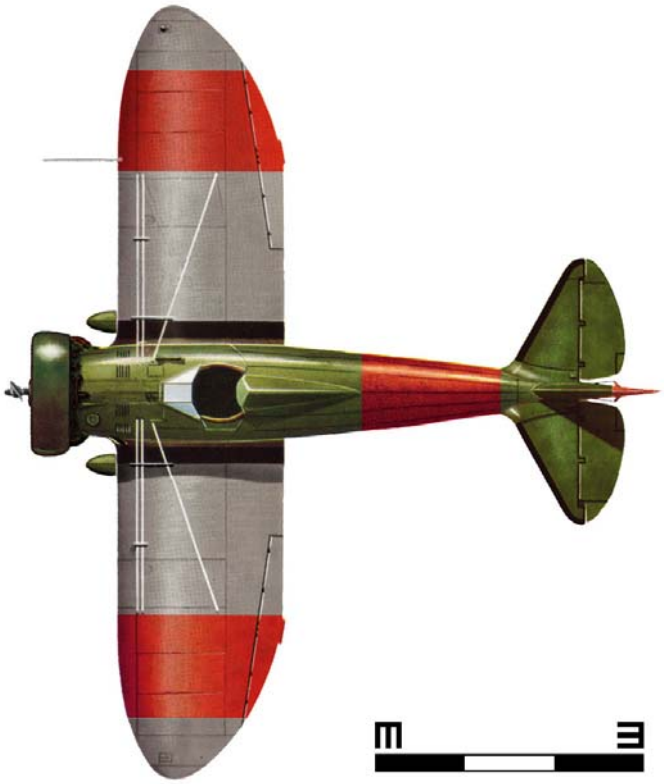


The only known photograph of Boeing Model 281 c/n 1962 in Spain. It was taken at Barajas National airport of Madrid in April 1935, during official presentation flights performed before Spanish Republic civil and military authorities, and published in the May 1935 issue of the Spanish aviation magazine "Revista de Aeronáutica". The man aboard was likely Boeing's chief test-pilot Les "Cowboy" Tower.



Capitán Ramón Puparelli Francia, standing center in white dress, seen at the airfield of La Albericia near Santander in August 1937. At the time, he was commanding Republican fighter units in the "Región Aérea del Norte", photographed with Spanish I-15 pilots then fighting on the Cantabrian front. Fourth standing from right is the Escuadrilla leader Leopoldo Morquillas Rubio.





Probable appearance of the Boeing Model 281 as in Republican Spain in July 1936. Wide red stripes were painted around the semi-gloss metallic-silver wings and the matt Olive Drab fuselage. The red-yellow-purple Republican flag is painted on the rudder. In October 1936, the aircraft probably received an ochre-yellow and olive-green patch-camouflage finish at least on the upper-surface of the wing. This color scheme was similar to the last operational Breguet 19 light bombers flown on Madrid front by the end of that month.



Probable appearance of Fiat CR.32 NC 123 flown by Sergente Raul Galli who was shot down by Puparelli flying the Boeing Model 281 on 30 October 1936 near Torrelaguna. It was camouflaged by narrow reddish-brown patches on sand-yellow upper and side surfaces with semi-gloss metal-silver under-surfaces and rudder.



Probable appearance of the Ju 52/3m g3e number 64 (type-code 22 not yet applied), 2a Escuadrilla Junkers, Escuadra B of Aviación Nacional. It was flown by Capitán Eustaquio Ruiz de Alda when it was shot down on 26 September 1936 near Bargas by Teniente Ramón Puparelli Francia flying the Boeing Model 281 of Spanish Republican Air Force.

The Avia-Fokker F-39 in Yugoslavia and Croatia

[Editor: This article first appeared in the French magazine, *AirMagazine*, and is printed here with the permission of their editor, Jose Fernandez. The translation is by Sandy Schachter.]

Avia-Fokker Bombers for Yugoslavia

In parallel with the first F-IX.1 destined for the Czechoslovak air force (see SAFO #146), two bombers of the same model called F-39 were constructed by the Avia factory for the VVKJ (*Vazduhoplovtvo Vojske Kraljevine Jugoslavije* = Royal Yugoslav Air Force). These planes were identical to the F-IX except for their engines and propellers: the Gnome-Rhone Jupiter of 450 hp driving a wooden two-bladed propeller. The engines were being produced under license in Yugoslavia by the Rakovica company.

The first of these bombers, registered F-39.101, made its first flight on January 21, 1932, piloted by factory pilots Cerny and Koci, the same crew made further test flights between February 25 and 27 to verify the flight quality as well as the speed and rate of climb. On the 28th, the plane was flown to Novi Sad to be delivered to the Yugoslav military authorities. On February 19, the second F-39, F-39.102 flew from Cakovice to Kbley with Cerny as pilot.

There were six test flights made by Cerny, Benes, and Venci (the last between the 2nd and 30th of March) before F-39.102 was handed over to the Yugoslavs. No other information appears in the flight notebook. Its technical description is identical to that of the F-IX, except for the mud guards adapted to the wheels.

Except for the markings, the livery of the Yugoslav planes was the same as that of the F-IX, with the national insignia on top and under the wings, and a tricolor flag (blue, white, red, from top to bottom) and the model and serial numbers in black on the rudder, AVIA being written in the Cyrillic alphabet, plus the inscription F-39.101 or F-39.102 on the sides, under the cockpit. The two planes were later repainted in a two-color camouflage scheme.

The Avia-Fokker F-39 in Croatian Aviation

Of the two models bought by Yugoslavia, one was destroyed during the German attack of April 1944, and the other, which was being repaired at the Ikarus factory in Zemun, escaped intact. In autumn of 1941, the independent state of Croatia (a satellite state of Nazi Germany) built an air force, the ZNDH (*Zrakoplovstvo Nezavisne Drzave Hrvatske* = Air Force of Independent State of Croatia). The Avia-Fokker F.IX was integrated into Croatian air force and was given the code 1801 on the fuselage while keeping two- tone camouflage that it had had in Yugoslavia. With the Breguet XIX, the Potez XXV, and the R-100, it was immediately used for bombing missions against the partisans in Bosnia-Herzegovia. During 1942, the F-39 operated with the *9. Jato* (9th Squadron) of the *3. Skupina* (3rd Group) based on the Rajlovac airstrip (at Sarajevo).

On March 26, 1942, while it was on a food and munitions delivery mission over Rogatica (the supplying of Croatian troops was often done by air since land convoys were often attacked by partisans), it was hit by antiaircraft fire. With a damaged engine it managed to return to Rajlovac.

Nicknamed "Babaroga" (the Witch), the F-39 was appreciated by Croatian airmen. The preceding example illustrates its capacity to fly on two motors when one was out of service. Its robustness and reliability added to the fact that it was the heaviest plane in Croatian service, made it an icon. It could carry an offensive load of 70 bombs of 10 kg, which was considerable in relation to what other planes could carry on missions against partisans.

During "Operation Trio" in the summer of 1942, it never ceased its missions over eastern Bosnia. During the second phase of this operation, the partisans doubled back toward Bosanska Krajina. The F-39 was charged with harassing them. The People's Army of Liberation of Yugoslavia general headquarters, in Mostar, was also a target for the F-39.

At the same time, during the spring of 1942 the Germans furnished the Croats with seven Avia Fokker F.VII transport planes and an F.XVIII, which had belonged to the Czech company Ceska Letecka Spolecnost before the war. These aircraft were equipped for passenger transport. With them there also arrived another Avia Fokker F.IX (also for transport). It received a code of "1952" on the fuselage.

In 1943, the Croatian air force received some Dornier Do 17 from the Germans. It finally allowed the Croats to use modern bombers (only relatively modern since the Dorniers were versions the Luftwaffe no longer used in its front-line units), and the F-39 and F.IX were confined to more peaceful missions: reconnaissance, transport, and parachutist use.

At the beginning of 1944, the lone F-39 was still in service. It was based on the airfield of Borongaj (Zagreb). It was part of the 19. Jato – za vezu (19th Squadron – liaison duties) of the 1. Skupina (1st Group). On April 12, 1944, the installations of Borongaj were bombed by the B-24 Liberators of the US 15th AF. The hangars of the 19. Jato were devastated and the F-39 was destroyed. The fate of the other F.IX, '1952', is unknown.□



Yugoslav F-39 '101' at the factory airfield at Prague-Cakovice. This plane with Gnome-Rhone Jupiter VI engines and metal propellers had already received its cowlings. Note the dorsal firing position.



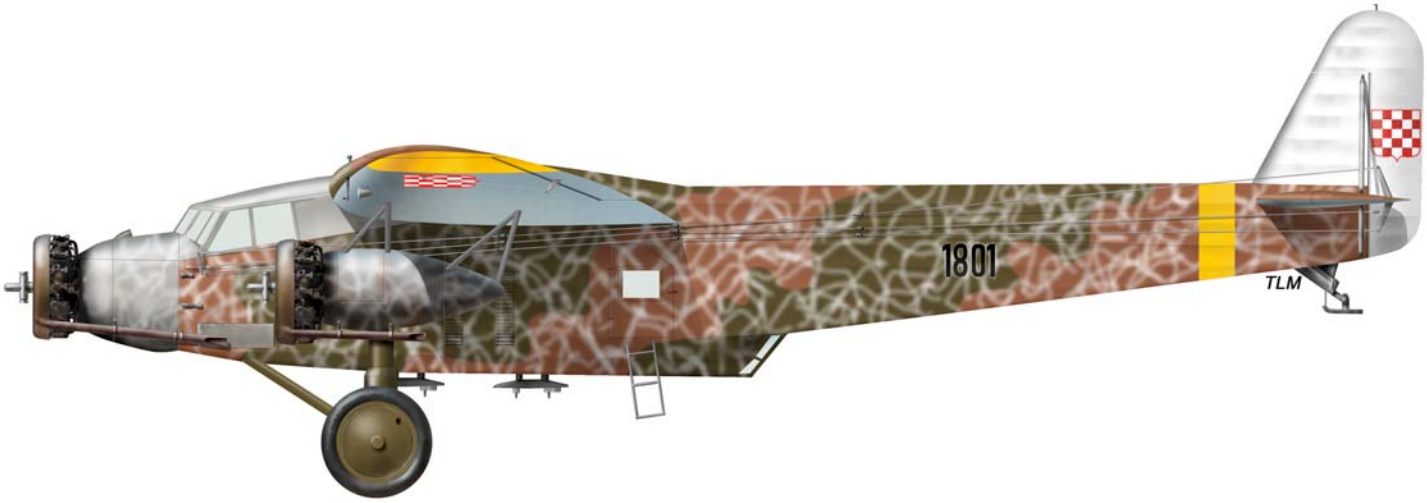
One of the Yugoslav F-39 (probably 101) with its original camouflage improved by the addition of irregular brown patches painted on the top and side surfaces.



F-39 (probably 102) served in the HRZ. The Croatian national insignia is carried on both surfaces of the wings and on the rudder. Note the underside of the wing tips are painted yellow.



This F.IX was sold by the Germans to Croatia. It would be called “Babaroga” (witch) by the HRZ pilots. The yellow number 1801 indicates that it belonged to the 19th Squadron of the 1st Air Group based at Zagreb.



Avia-Fokker F-39 in the winter of 1943-1944. The upper and side surfaces were painted over with irregular squiggles of aluminum color. The vertical tail was painted in the same color and the number 1801 was black..

Captions for the Photos on Pages ____

1. F-39 ‘101’ was one of two planes acquired by the Yugoslav army. Note the upper turret, which would later be removed.
2. The nose of a F-39 on Kbely airfield before its transfer by flight to Novy-Sad. The pilot Cerny is in front of the plane. Note the wooden two-bladed propeller and the engines without Townend cowling.. (Archive R. Schneider)

3/5 Three photos of the Yugoslav F-39 ‘101’ taken on the factory airfield at Prague-Cakovice. This plane had Gnome-Rhone Jupiter VI engines and metal propellers. Note the dorsal firing position in one of the photos.

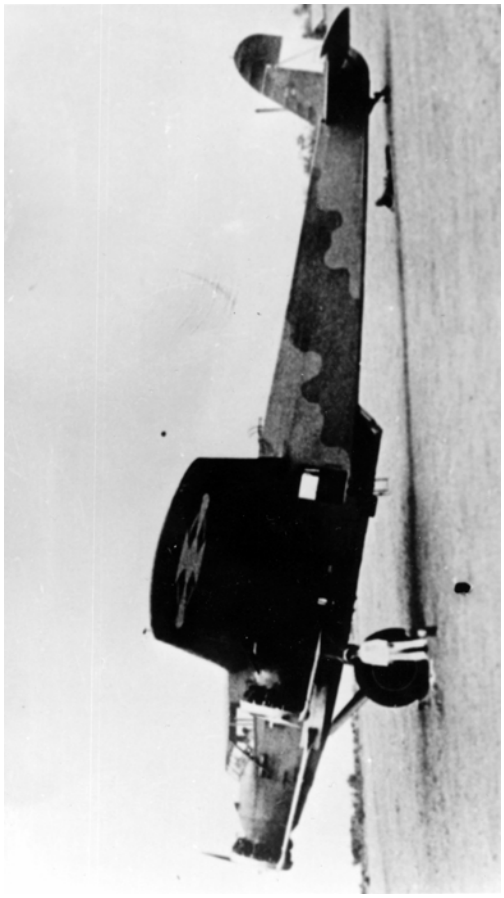
6. One of the F-39 (probably 101) with its original camouflage improved by the addition of irregular brown patches painted on the top and side surfaces. After the division of Yugoslavia, the plane served in the Croatian air force (HRZ - *Hrvatsko Ratno Zrakoplavstvo*). (Photo Mitja Marusko via R. Schneider)
7. This F.IX was sold by the Germans to Croatia. It would be called “Babaroga” (witch) by the HRZ pilots. The yellow number 1801 indicates that it belonged to the 19 Jato of the 1st Air Group based at Zagreb (Photo Mitja Marusko via R. Schneider)
8. The same plane photographed in the winter of 1943-1944. The upper and side surfaces were painted over with irregular squiggles of aluminum color, the rudder entirely painted in the same color, and the number 1801 was black. The photo was taken on Borongaj airfield where an Italian training plane A.V.I.A FL.3 can be seen in front of the F.IX. (Photo Mitja Marusko via R. Schneider)

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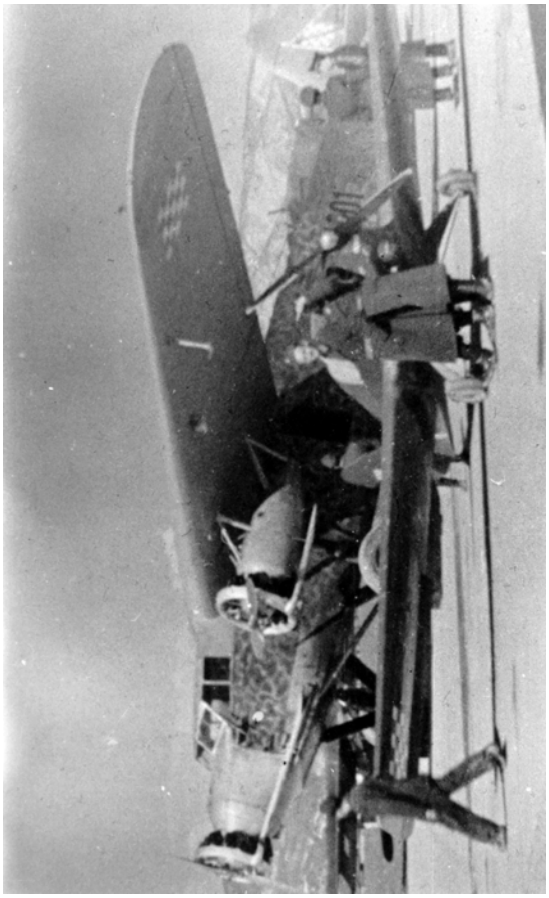
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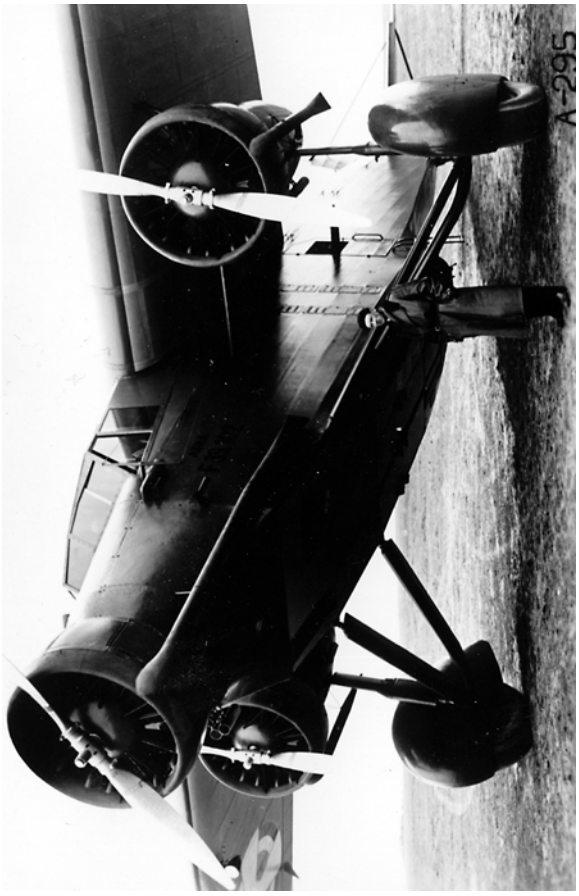
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Military Aviation in Holland before World War One

Part 1

Frits Gerdessen

Military aviation in Holland started, as elsewhere, with balloons, when one was bought in 1886. This was operated by the 6th Fortress Company of the Engineers Corps, who made some balloons of their own. The balloon operations didn't last long, but in 1901 there was renewed interest in ballooning, and in 1902 1st Lt. P.J.P. van der Steur (engineers) was posted to the Militär Aeronautische Anstalt in Wien (Österreich) where he became the first certified Dutch balloon pilot. The engineers corps or regiment (Korps or Regiment Genietroepen) was the only "technical" unit in the army. It was not only charged with operational duties, but had also a branch (Dienst der Genie) which was responsible for all military infrastructures. It was thus logical that the engineers were charged with the operation of balloons. In 1904, balloons were again acquired, but were now operated as target balloons by the 3rd Pioneer Company of the Engineers Regiment, until World War One broke out. This company made more balloons and a number of kites. The company had its quarters in Utrecht, and each year a number of detachments were posted in the LbO (Legerplaats bij Oldebroek, Oldebroek Army Camp, the Artillery shooting range) to operate the balloons.

On 29 February 1908, capt. H. Walaardt Sacré was appointed C.O. for the 3rd Pioneer Company and the next day he was charged with "aviation in the regiment". Soon he would be the expert on ballooning. Also in 1908, 2nd Lt. W.H. Schukking (engineers) experimented with a glider near the army camp at Zeist. He had corresponded with Wilbur Wright. After some tests, he gave up aviation. The choice was to fly or to marry. (He became a fortification specialist and became a POW in WW2.) In the navy, there was also some interest in aviation. LTZ (Luitenant ter zee = naval lieutenant) A.E. Rambaldo was a balloon pioneer, but he was killed in a balloon crash in Java (Netherlands East Indies) in 1911. LTZ D. Vreede experimented in 1908 with a glider towed by a destroyer.

Also in 1908, the first Dutchman went aloft in an airplane. Ir. John Rozendaal (01.07.1877/07.1955) had graduated and worked as mechanical engineer in Germany. He took up interest in aviation and got in contact with the Wright brothers. On 9 October 1908, he got a ride with Orville at Pau in France. Rozendaal became a journalist and (especially in Germany) an authority on aviation, and as a consultant assisted in the early years of the Luchtvaartafdeeling. In the thirties he returned to Holland.

On 19 October 1907, an aviation society was founded, partly on the initiative of LTZ Rambaldo. The first president was col. C.J. Snijders (engineers). Soon this society was renamed: Nederlandsche Vereeniging voor Luchtvaart (NVvL, Netherlands Aviation Society). In November 1912, the NVvL became the KNVvL (Royal Netherlands Aero Club). Kol. Snijders was soon posted to the General Staff as major-general and rose to CGS (Chief General Staff) as lt.general. Since he was in charge of military balloon operations, kapt. Walaardt Sacré became a board member of the NVvL responsible for civil balloon operations, in addition to his military ballooning duties.

Gen.maj. Snijders asked capt. H. Walaardt Sacré to specialize in aviation, and in October-November 1909 Walaardt Sacré was sent to the Luftschiffer Bataillon in Berlin where he qualified as a balloon pilot. He wrote some reports and advised on the use of balloons and dirigibles pointing out that aircraft were far from reliable. In 1910, however, he saw more use for aircraft and advised the government to encourage officers to train as pilots. More postings abroad followed in Germany and in France. In 1911, W. Jochems donated a Zodiac airship to the Dutch State, and Walaardt Sacré was sent to Paris to accept and train on the ship. He was accompanied by one of his NCO's, sgt. C.J.A. Hoogeveen. Walaardt Sacré qualified as an airship pilot. Then, on 21 March 1911, he made his first flight in an aircraft as a passenger with aviation pioneer Henri Wijnmalen at Soesterberg. From 1910, several Dutchmen qualified as pilots, mostly abroad. In Holland six got their license at the Molenheide with the ENV (Eerste Nederlandsche Vliegvereniging = First Dutch Flying Club), and two at Soesterberg and Ede.

The beginnings of heavier-than-air flight in Holland

The first heavier-than-air flight in Holland was made on 27 June 1909 by Count de Lambert with a Wright biplane. After that, interest in aviation increased. The next years, several Dutchmen took up flying at home and abroad and built or bought their own aircraft. Among them were four lieutenants who were encouraged by the Ministry of War and the Colonial Office who gave them leave and continued their salary. They qualified in 1911: H. ter Poorten (NEI Army, in Belgium), W.C.J. Versteegh (in Austria), L.F.E. Coblijn (in France), and F.A. van Heijst (at Soesterberg). Reserve officers also qualified: J. Labouchère, a technical university student who never graduated, joined the French Zodiac company, obtained his license in 1910 and worked as designer and demonstration pilot. P.M. van Wulfften Palthe, a medical student, obtained his license with Farman in 1914. H.G. van Steijn (Navy reserve) and his brother L.G. van Steijn qualified in France in 1912 and 1913 respectively. The civilian pilots, except for Henri Bakker, had all stopped flying before the outbreak of World War One.

The first airfield in Holland was the Molenheide, better known as Gilze-Rijen, established by the ENV. The first flights were made in early August 1910, and it became a military air base in August 1914. (It is still operational as a military air base.) The ENV built hangars and started a workshop and a flying school. Six pilots graduated from there in 1911-1913, among them Frits Bahle, Henri Bakker, and Heinrich van der Burg. The latter built some aircraft and was the ENV's chief designer. One future military pilot got his license there on a Van der Burg monoplane: 2nd Lt. L.J. Roeper Bosch. Van der Burg stopped flying in 1914.

Flying begins at Soesterberg

In 1910, J.F. Verwey, director of Verwey & Lugard's Automobiel Maatschappij.at Den Haag, decided to enter aviation. The firm rented a heath spa near Soesterberg (township Soest) and in short time had a well-equipped field ready. Another field was built at Ede. On the 26th and 27th of November, the first flying contests were held, with ir. G.P. Küller, Henri Wijnmalen and Frits Koolhoven participating. The Maatschappij voor Luchtvaart (MvL, Aviation Company), founded by Verwey & Lugard, started a flying school, a factory, and organized demonstrations and contests. At Soesterberg, a large assembly shop and 4 wooden hangars were built, as well as numerous other buildings: office, restaurant, hospital (this building still exists), toilets, kiosks etc. Also a tramway connecting to the nearest railway station was constructed and ample parking space provided. At Ede some hangars were built.

Verwey & Lugard sent one of its technicians, NEI-born J.W.E.L. Hilgers, to France to learn to fly. When they became aware that pioneer-pilot Clement van Maasdijk was preparing to make the first flight in Holland, Hilgers was summoned back with a Blériot monoplane, but without a flying license. Hilgers made the first flight by a Dutchman at Ede on 29 July 1910. Hilgers couldn't make turns yet, thus he landed, turned his aircraft around, and took off again. Van Maasdijk (French license dd. 1 July 1910) made his first flight in Holland with a Sommer biplane the next day, 30 July. Sadly, Van Maasdijk was killed in a crash with his Sommer on 27 August.

The MvL appointed three managers: Henri Wijnmalen for training, Frits (Frederick) Koolhoven for operations, and Jan Hilgers for the workshop. The first plane they built was a Farman-type designed by Koolhoven. Koolhoven possessed a Hanriot, which was too light to carry this heavy pilot. At least three more aircraft were built based on the Blériot. One flown was the V&L monoplane. The European Tour (18th June - 7th July 1911) which started from Vincennes had Soesterberg as one of its staging points, and attracted appropriate attention.

There were up to eight pupil pilots, but only one qualified: Lt. F.A. van Heijst. Hilgers, who also gave flight instruction, obtained his license on 12 August 1911. The promising enterprise was soon in trouble as the public interest in aviation waned and on 29 January 1912, the MvL went bankrupt, but not before the three managers found employment abroad, Koolhoven joined Deperdussin in France, Wijnmalen became factory pilot with Oertz in Germany, and Hilgers joined Fokker in Germany. In 1912 Hilgers flew demonstrations in Latvia, Estonia, and Imperial Russia. He then returned to NEI and later joined the aviation unit there.

The MvL continued paying rent to the township of Soest, but in October the town council decided to transfer the rent to the oil company NV Acetylena (a subsidiary of Shell). In November, the council

discussed the interest by the War Ministry for the field. They asked ƒ 280.000. (Acetylena sold petrol under the name Autoline, other oil firms supplied petrol under the name Sumatrine and Carburine). The buildings and inventory came into the hands of Acetylena directors C.A.G. Deterding (brother of Shell director H.W.A. Deterding) and J.M.W. de Haan.

The only one still active at Soesterberg was pioneer pilot Marinus van Meel, who had been in the cheese business. He had obtained his license in France and took part in the European Tour. He was too late to start from Vincennes and started at Luik (Liège) in Belgium. Van Meel got in trouble over Holland. Once here, he gave demonstrations and arrived at Soesterberg on 20 August. He remained there. The other Dutch participant, Henri Wijnmalen, didn't make it either. He crashed at Roubaix on 1 July. After he took off from there on 3 July with a reserve aircraft, he crashed again. Van Meel then occasionally worked for V&L and built an improved copy of his Farman.

By now the army was interested in aviation and Van Meel, Bakker and Lütge, all reserve sergeants, signed 5-year contracts as reserve pilot. Van Meel and Bakker, promoted to ensign in 1912 1911 respectively, were called up in August 1914, but did not fly. The LVA wanted only officer pilots, and as NCO's they had no future in the service.

Army maneuvers 1911

The army, which was modernizing, held its 1911 bi-annual exercises between 20-26 September in the area between 's-Hertogenbosch and Nijmegen. For the first time aircraft were used. Six pilots made themselves available with their aircraft. Also, two balloons participated. The first (temporarily) military air base in Holland was established south of the town near the inn "De Pettelaar". This job was assigned to the 3rd Pioneer Company. They set up three tent hangars and a camp for themselves.

The pilots involved were:

res.lt. J. Labouchère	2-seat Zodiac biplane of his own design
lt. (NEI) H. ter Poorten	2-seat Brouckère tractor biplane
reg.sgt. H.F. Lütge	1-seat Blériot monoplane
H. Bakker	2-seat Blériot monoplane
J. van Bussel	2-seat Blériot monoplane
M. van Meel	2-seat Farman biplane

Volunteering as observers were: lts. Van Heijst, Coblijn, Visser, and Versteegh (all of whom were under flight training), LTZ Wijers, and lt. (NEI) Leenderts. The Dutch Automobile Club provided three cars. The Royal Meteorological Institute at De Bilt had an observer at the camp with balloons and instruments. The camp was connected by telephone and telegraph to the Staff Headquarters.

Apart from test flights, 9 "operational" sorties were flown. On 21 September, the weather was unfavorable, but on the 22nd Labouchère/Coblijn, Lütge, Bakker/Visser, and Van Meel/Van Heijst made useful observations. Lütge had engine problems and was made a "POW" after his forced landing. After being released and repairs were made, he crashed on take-off. Van Meel landed in the dark with help of fires set up at the base.

The 23rd started with a thick fog and a fuel shortage. Only Lt. Ter Poorten made a sortie. At 1600 there was an armistice until 0800 on the 25th when 4 sorties were flown: Bakker/Visser, Van Bussel, Van Meel/Van Heijst and Labouchère/Lt.Gen. Snijders. CGS Snijders wanted to see for himself how things were going, and on his return commented, "This will have some use." Capt. Walaardt Sacré made a short flight with Labouchère. One observer's report was outstanding, but apparently anonymous. The maneuvers staff later found out it was from gen. Snijders.

The maneuvers ended on the 26th. After these maneuvers concluded, the two balloons made a flight with observers. A lot was learned, and capt. Walaardt Sacré wrote an extensive report. It was clear that the army had to create a military aviation unit. Capt. Walaardt Sacré advised the use of dirigibles, balloons, and aircraft. He also suggested the establishment of a base at Ede. This field had been abandoned by the MvL on 1 September (possibly because of rumored financial problems). This field had three hangars and was located next to an army garrison.

After the maneuvers, Lt. Ter Poorten was ordered by the Colonial Office to start preparation for the introduction of military aviation in the Netherlands East Indies. After some time he returned to NEI.

Later in 1911, the organization of a military aviation unit was discussed in Parliament. The

budget was not a problem, but MP M. Tydeman considered that the problems had not been considered that the problems had not been sufficiently thought over - and Parliament agreed with him. The introduction of dirigibles would require a lot of money; dirigibles would require an extensive infrastructure, lots of personnel, and high operation costs. The MoW withdrew his plans.

Next year, the case was again dealt with. In January 1913 MP Tydeman stated that military aviation should be based on aircraft and nothing else. This was accepted by Parliament on 15 January 1913. Thus the use of balloons and dirigibles was abandoned. Capt. Walaardt Sacré, as balloon- and dirigible pilot, was not pleased.

Soesterberg becomes a military airfield

In 1912, Van Meel offered his Farman copy to the MoW as a trainer for the three officer pilots: lts. Coblijn, Van Heijst, and Versteegh. The MoW accepted and now Soesterberg became a bit of a military air base. The nearby garrison at Amersfoort provided personnel for the ground service. All went well until around the 1st of December when lt. Coblijn crashed the Farman. Just before, on 28 November, Van Heijst and Versteegh had made the first meteo flights in Holland. The Royal Meteorlogical Institute (KNMI), at nearby De Bilt, had a meteo station in a corner of Soesterberg to operate kites and balloons. That day there was hardly any wind and no kite could be launched.

Coblijn and Versteegh were posted back to their army units, but Lt. van Heijst remained as Van Meel started to build another aircraft named “Brik” (break or brig). It was a single-seat improved Farman model that made its official first flight on 28 March 1913. Now the three pilots could continue their training flights. With the foundation of the LVA on 1 July 1913, the “Brik” was leased by the MoW, and on 6 September it was bought by the MoW.

After V&L went bankrupt, Ede was little used. Henri Bakker brought his Blériot there in 1913 and occasionally flew there during WW1. The LVA hardly used Ede. In 1917, Joop Carley established a workshop and later a flying school. He built some aircraft, but had no success. He closed his factory and on 28 September 1921 an auction was held, which meant the end of Ede as an airfield.

CGS Lt.gen. Snijders decided that capt. Walaardt Sacré would be seconded to him to deal with all matters concerning the future military aviation. Walaardt Sacré thus became the central figure for aviation matters in the army and he was relieved of his post as company commander.

An airfield had to be found, and Soesterberg was the obvious choice as it was near some garrisons, had a lot of buildings, and was available as the MvL had abandoned the place. On 28 March 1913, Soesterberg was bought by the government for ƒ 266.000. The Acetylena directors sold the buildings for ƒ 44.600. On 16 April 1913, Queen Wilhelmina, on holiday in Oberursel (Germany), signed Royal Decree nr. 29 which stipulated that on 1 July 1913 a *Luchtvaartafdeeling* (Aviation Unit) be established at Soesterberg.

The development of the LVA had already been planned. In 1913-1916 respectively. 4, 6, 8, and 10 aircraft would be purchased along with automobiles, hangars, equipment, etc. The organization would be gradually expanded and a number of hangars would be erected.

Once the field was taken over, it was put in charge of the Dienst der Genie[1] (Engineers Service), which was (and still is) responsible for all military infrastructure. Soesterberg was in the engineering region of Amersfoort, a nearby garrison town. The local EaI (Senior Engineer) soon had a contractor at work for the adaptation of the buildings for military use. In April an inventory was made of the materials that had been left behind. These ranged from three Blériot-type aircraft (one complete) to tools, furniture and crockery.

Once the LVA had been officially founded and capt. Walaardt Sacré was in command, the cleaning up of the base was in full swing. Everything the LVA didn’t need, such as fences, flagpoles, toilets, kiosks, etc. was, if possible, put to use elsewhere in the army. The tramway had already been broken up in 1912. As an engineers officer, capt. Walaardt Sacré was in his element. The LVA retained the office (as staff building), the restaurant (as barracks), the hospital, the fuel store, the four hangars, and the assembly shop (later known as the “factory”).

To be continued

Frits Gerdessen (SAFCH #12), Netherlands.

[Author’s note: I would like to thank Klaas Jan Sijsling for reading the manuscript and making additions and corrections.]

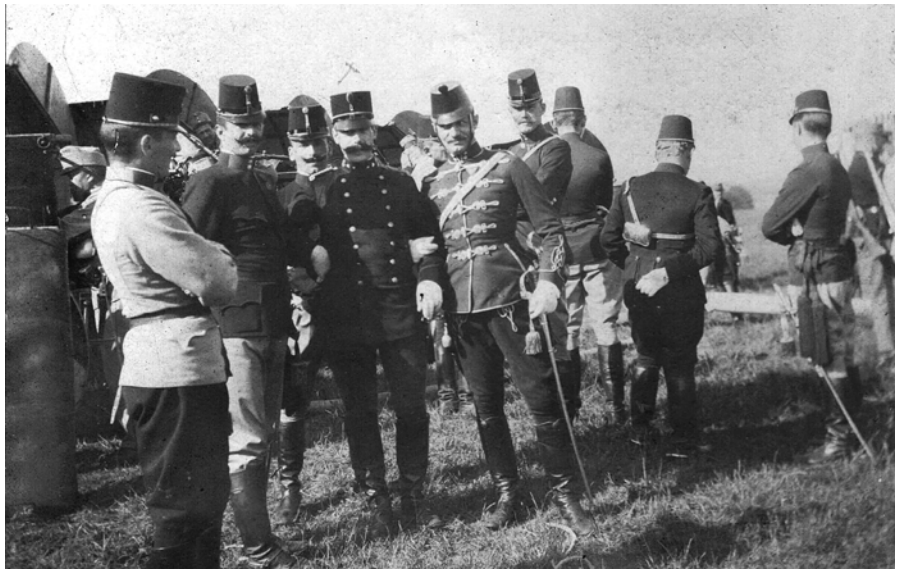
Notes

1. The Genie had its origins in 1748, when Parliament decided that the army should have its own engineers regiment. In WW1 the Genie was the only technical branch of the army. By then it had several specialized branches, among these the railway troops and communications (telegraphy, later telephony). In 1906 one started with wireless. The Genie had two offspring: First the Luchtvaartafdeeling (Air Force) and secondly the Verbindingstroepen, the Communications Regiment. Up to 1940 the Genie also operated the searchlights.
2. We have/had many fewer ranks for NCO's and others than elsewhere: soldaat, soldaat 1e kl.; korporaal, korporaal 1e kl.; sergeant, sergeant 1e klas (1½ chevron); sgt.major (double chevron, sometimes nicknamed "dubbele" (the double); adjudant (button, nicknamed "stip" = dot).

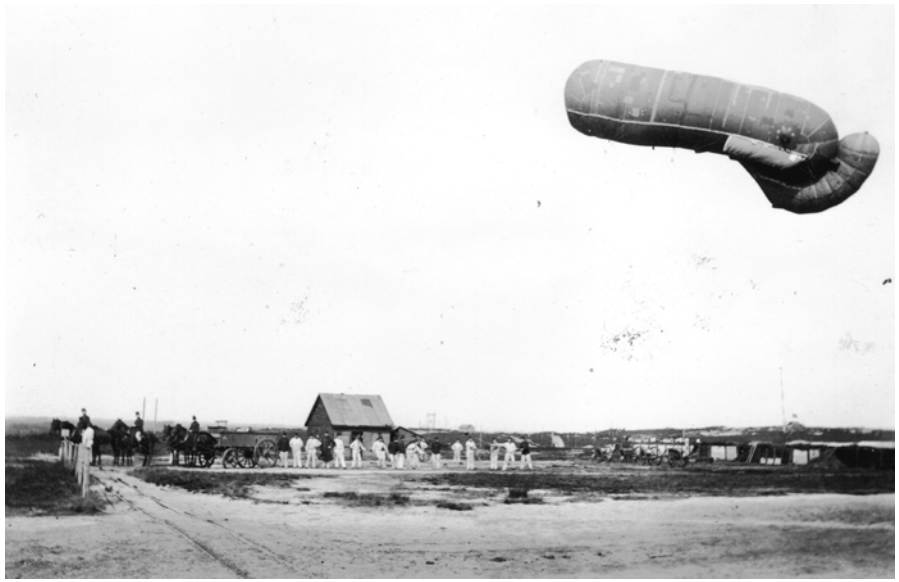
Captions for the photos on pages 93-97

All photos via the author unless otherwise noted

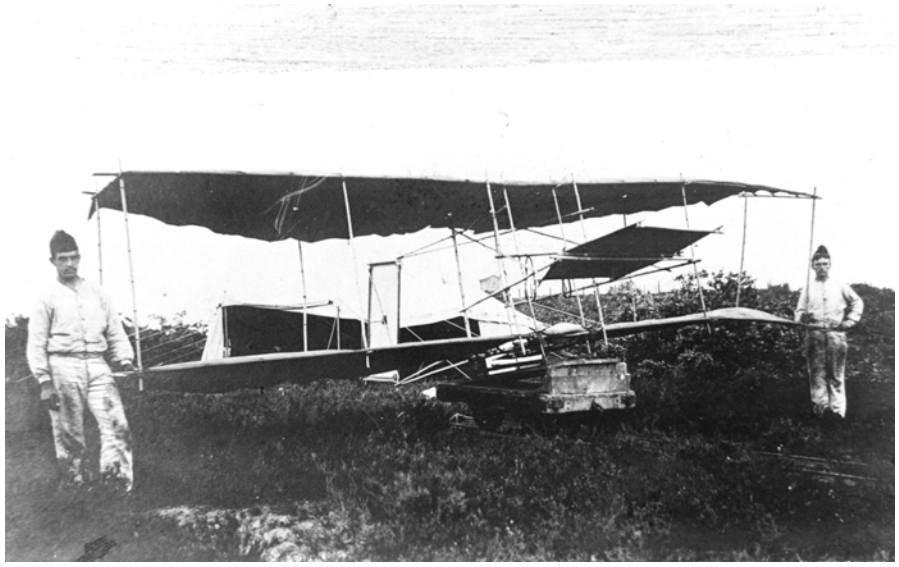
01. Capt. P.J.P. van der Steur (3rd from left in black uniform and large moustache) and officers of the Militär Aeronautische Anstalt in Wien, 1902. These Austrian warriors could be quite experienced. Their colorful uniforms can be seen today in movies and operettas. At the so-called "Military Borders" of the south and east (the Balkan side) of the Doppelmonarchie there could be action, especially when the other side was still in Turkish hands. Doppelmonarchie = Double Monarchy, Austria (Kaiser = Emperor) and Hungary (König = King). In these days the Kaiser was Franz Josef. Often a prefix is used: K.u.K. = Kaiserlich und Königlich.
02. Target balloons could go up to 600-800 meters. Repair patches are very visible.
03. The Schukking glider. Photo in the Geniemuseum.
04. Clement van Maasdijk during his ultimately fatal demonstration tour in the summer of 1910.
05. J.W.E.L. Hilgers and his mechanic J. Verhagen with a Blériot. Verhagen joined the LVA, ending as sgt.major post WW2.
06. Great activity at the Molenheide (Gilze Rijen) during the European Tour in 1911. Aircraft 12 was a Blériot flown by Beaumont.
07. A Blériot belonging to the ENV at Gilze-Rijen with pilot Constant Busch. Also present are the pilots Mulder, Bakker, Van Bussel, Bahle, and Jhr. Bosch van Drakestein.
08. One of the Bleriots at De Pettelaar airfield, September 1911. Two impressive maréchaussee stand guard. At right with a double white chevron is a maréchaussee 1st class (corporal 1st class). Next with narrow silver chevron is a wachtmeester (sergeant). Both with white cords, etc. Quite impressive.
09. Lt. H. Ter Poorten with a Brouckère tractor biplane at the maneuvers in September. 1911.
10. Capt. Walaardt Sacré (in front) had a 10 minutes ride with Lt. Labouchère in his Zodiac at De Pettelaar on 22 September 1911.
11. A captain (3 stars), 2nd from right (it could be Walaardt Sacré) explains to officers during the maneuvers in Sept. 1911. At left, a corporal (yellow chevron). The 3rd is a ritmeester (hussar's captain) has embroidery on his coat and boots.
12. Van Meel enjoys having three passengers in his Farman: Miss Van Dijk (centre) and her brothers.
13. Heinrich van der Burg with his first airplane.
14. Van Meel's 2nd Farman at Soesterberg, 1912.
15. V&L monoplane (Blériot model) with instructor Hilgers on top and pupil pilots in front. Centre Lt. F.A. van Heijst.
16. Van Meel demonstrating with his first Farman at Wadenoijen in mid-July 1911.
17. Henri Bakker with his Blériot.
18. 23. J.W.E.L. Hilgers and his mechanic with a Fokker Spin in Nõmme in Summer 1912. Nõmme is now part of Tallinn, Estonia. Photo from Elmar Brantman (†).



1



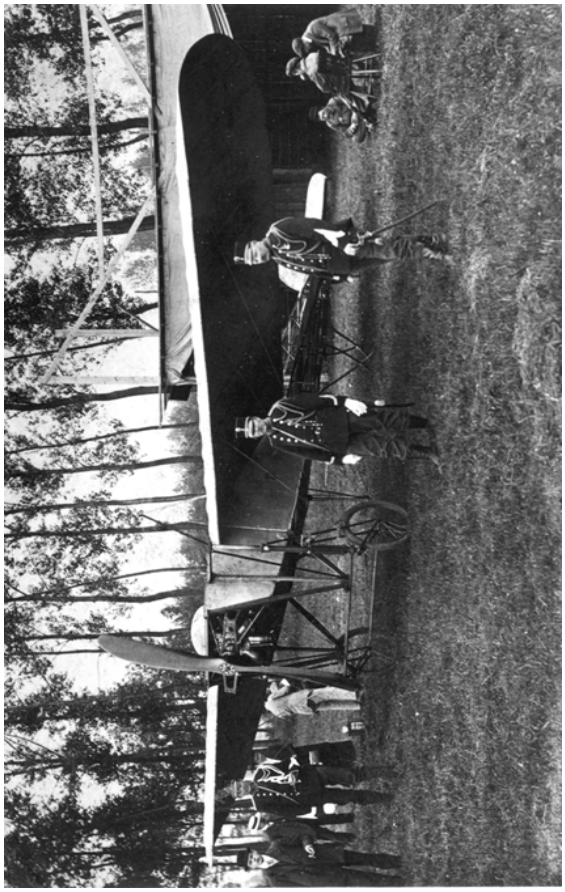
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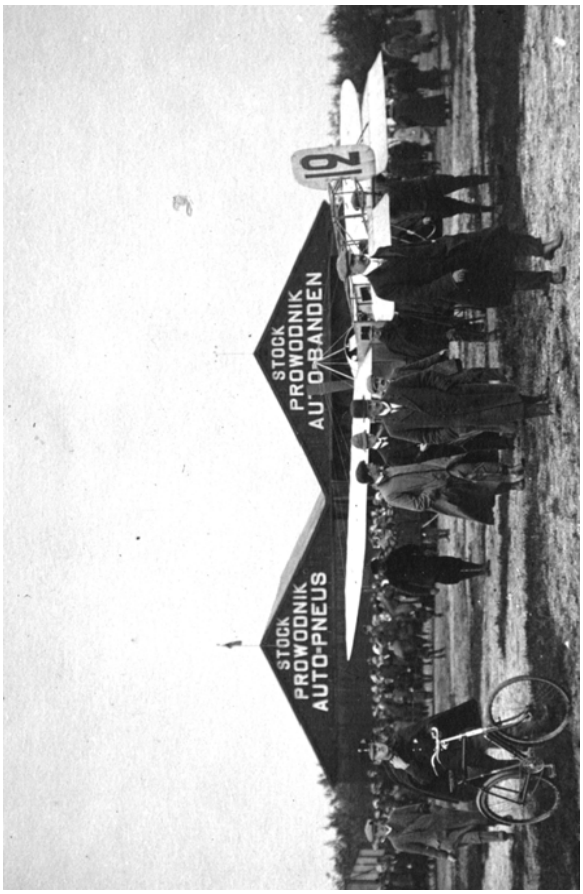
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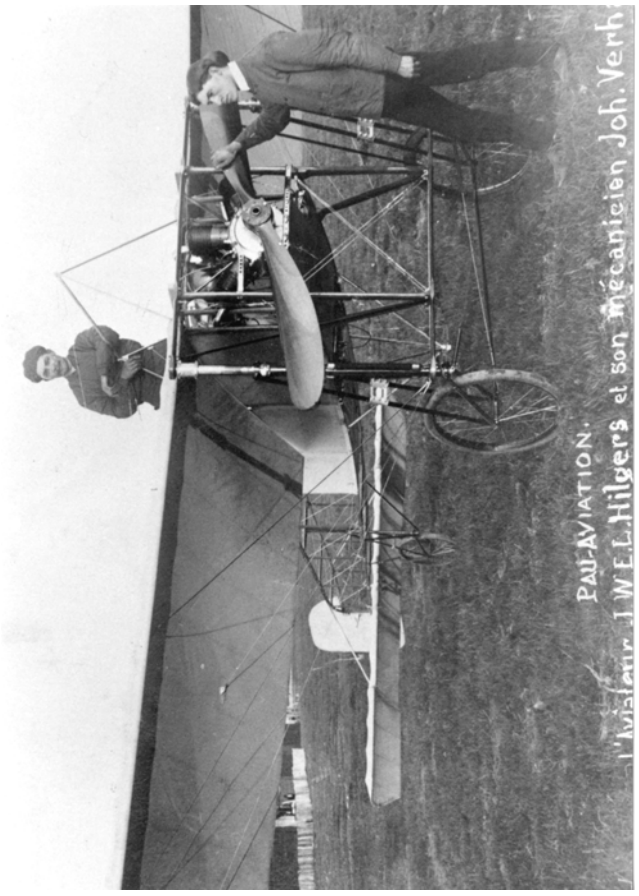
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6


STOCK
PROWODNIK
AUTO-BANDEN
STOCK
PROWODNIK
AUTO-PNEUS

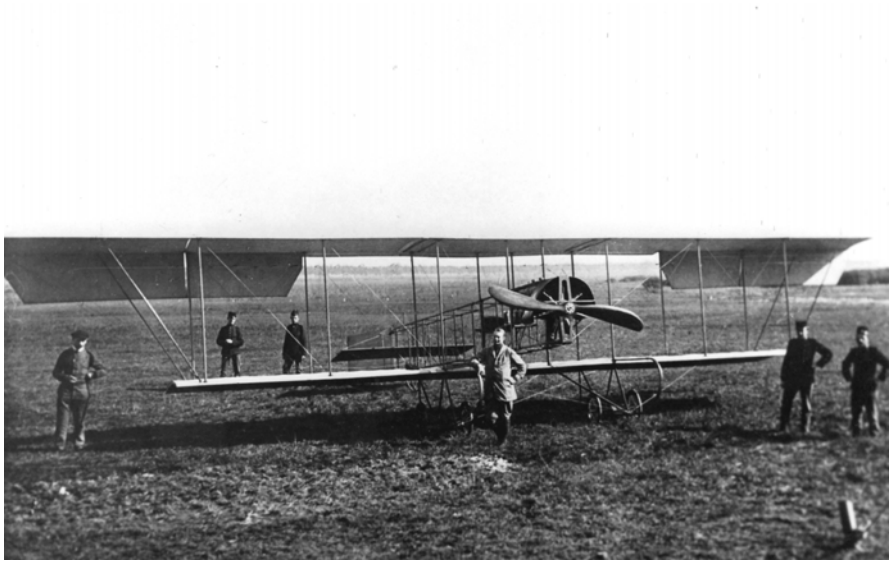
8


PAU-AVIATION.
l'Aviateur J.W.E.L.Hilgers et Son Mécanicien Joh. Verh

5



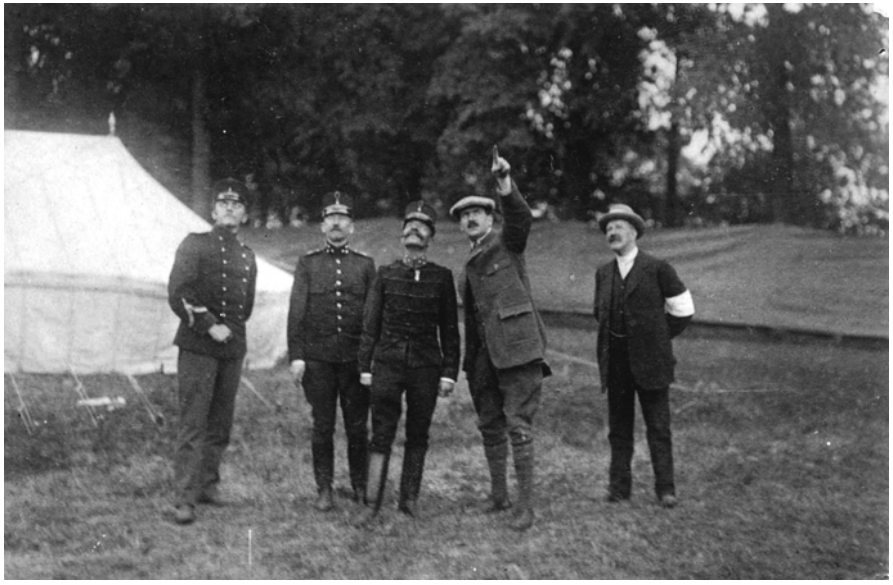
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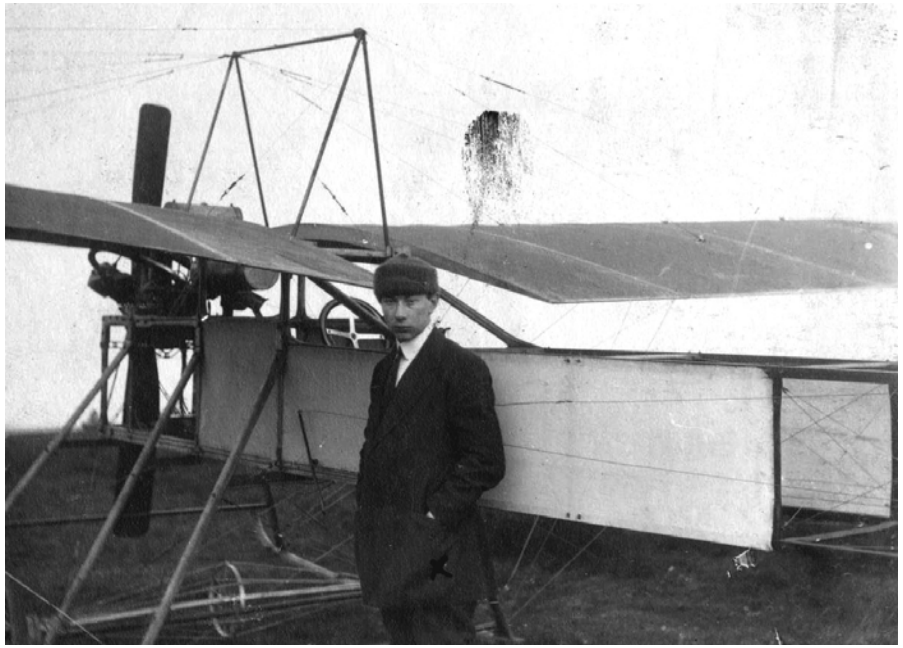
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12



13



14



15


De Tielsche Vliegweek.
Aviateurs en Comitéleden bij de machine.

16

18

17

Markings of Czechoslovakian Military Aircraft 1919-1939

R. Ernst

Author's note: This survey is not intended as a detailed description of the markings carried by Czechoslovak military aircraft in the period 1919-1939, but it is designed as a guide to basic principles followed in those days. It meant to facilitate general orientation.

The first specified Czechoslovak nationality mark was a cockade with three colors white/blue/red (from the inside), in some cases with a white outer edging. (Fig. 1)



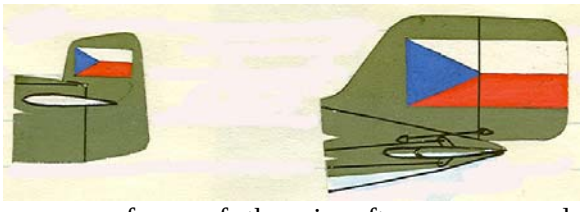
This was painted on both surfaces of the wings as well as on the fin. The wing cockades were originally situated about mid-span on the wing, but were soon moved to the wing tips.

The camouflage at that time varied: The Fokker D.VII carried the typical German lozenge scheme consisting of variegated hexagons, but others were grayish green, etc. Black "type" numbers (or letters) were painted on both sides of the fuselage between the cockpit and the tail. This system of marking was adopted from the Austro-Hungarian Air Force.

During 1920, the cockade was replaced by the national flag. This was painted on both sides of the wing and on the tail. Originally, the flag did not occupy the whole chord, but ended a few inches in front of the trailing edge, e.g., on the Breguet 14 and Salmson. (Fig. 2)



The flags on the wings were always painted with the red inboard, white outboard, and blue near the leading edge. On the tail, red was always beneath, white up, and the blue near the leading edge of the fin on both sides. (Fig. 3)



The upper surfaces of the aircraft were sprayed in a camouflage pattern of earth brown, ochre, and green. The boundaries between the colors were not distinct, but gradually faded into each other. All lower surfaces were sprayed silver, including the engine cowling. On aircraft with a fuselage of elliptical cross-section, the entire fuselage was camouflaged with the upper surface scheme, only the lower surfaces of the wings and tail were silver. The black "type" designation remained as before on both sides of the fuselage. This was the painting, marking, and camouflage of the aircraft of the Czechoslovak Air Force in the period 1920-1923.

Beginning in 1923, the camouflage on Czechoslovak Air Force aircraft changed. The fields of brown, ochre, and green remained unchanged, but now the borders between the colors were sharp, On 1 January 1924, the black "type" designations on the fuselage disappeared and were replaced by regiment emblems. These emblems were painted on both sides of a fuselage in black on a 50 cm (height) by 45 cm white background bordered in black. (Fig. 4)



1st Regiment (Prague, Bohemia) was allotted the sign of a Czech lion.

2nd Regiment (Olomouc, Moravis) the Moravian eagle,

3rd Regiment (Nitra) the Slovakian cross. (see below).

For extra ordinary performance during a year, some military units or individuals from the active flying crews were given permission to have their emblems put on a scarlet-red background. Such permission was awarded for the period of one year only.

Simultaneously, all training aircraft were repainted in an aluminum color to make the easily recognizable and provided with a blank white emblem 50 cm by 45 cm bordered in black. (Fig. 5)



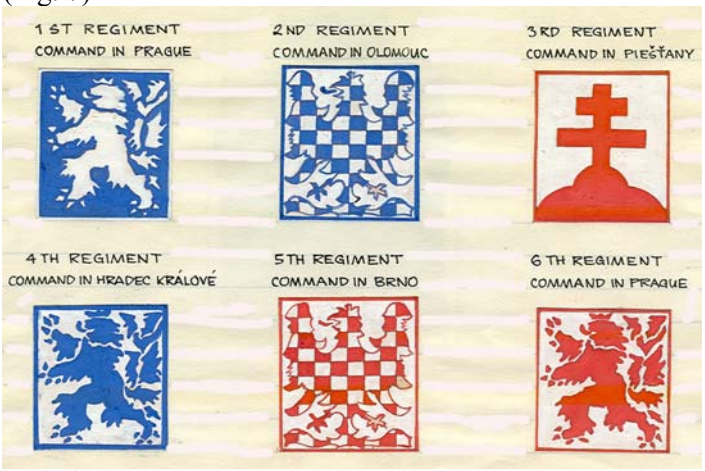
During 1926, a fundamental change was introduced when the camouflage scheme was gradually replaced by a uniform khaki color on all upper and lateral surfaces of an aircraft while the bottom surfaces remained as before (silver). Training aircraft did not change their painting, retaining the same markings as effective in 1924.

At the same time, the national insignia was changed from the rectangular flag to a circular disk with three equal sectors in red, blue and white. Situated on the wings (upper & lower surfaces) and on the tail, the orientation of the colors remained as for the flag insignia. (Fig. 6)



They were bordered blue, but starting in 1933 sometimes they were bordered in red. These insignia were never to be found on the fuselage. The regiment emblems remained unchanged on both sides of the fuselage.

As a general rule, if an aircraft carried the three-tone camouflage scheme, then it had a flag as its national insignia. On the other hand, if it is khaki colored it carried the circular national insignia. With the exception of a change in the designations of air force regiments during 1931, this latter way of painting and markings remained standard with few exceptions until 1939. In 1931, new regiment emblems were assigned to both original and newly established military units in the following way: (Fig. 7)



1st Air Force Regiment (Prague): A white Czech lion on a blue background.

2nd Air Force Regiment (Olomouc): A blue Moravian eagle on a white background.

3rd Air Force Regiment (Piestany): A red Slovakian cross on a white background.

4th Air Force Regiment (Hradewc Kralove - fighters): A blue Czech lion on a white background.

5th Air Force Regiment (Brno - (bombers): A red Moravian eagle in a white background.

6th Air Force Regiment (Prague - (mixed): A red Czech lion on a white background.

The Air Force Flying School designated its airplanes by the letter `C' of the same size as the regiment emblems. Similarly, the Air Force Study Institute (VLUS) had all its aircraft marked by the letter `S'.

The size of the regiment emblems remained 50 cm by 45 cm. The shade of the colors of the emblems were the same as those used for the national insignia. The border, 12 mm wide, of the regiment emblem was the color as the lion, eagle, or cross. Emblems were painted on both sides of the fuselage. Regiments assigned to each of its squadrons a letter (with the exceptions of C and S). Then the squadrons marked their aircraft by digits starting from number '1'. The same system was used by the Flying School and the Air Force Study Institute. Both the letters and digits were 70 cm high with 8 cm wide strokes. The width of the letter and digit was determined by the space available, These digits were 15 cm from letters.

The follow rules were strictly adhered to: (A) Letters and digits are white if the ground color is khaki, or if it is of a dark shade (red, brown). (B) Letters and digits are blue if the ground color is silver or light gray. (C) Training squadrons within the regiments (not the Flying School) also had silver-colored planes, but the regiment and squadron markings were carried on both sides of the fuselage. During the mobilization of the Czechoslovak army in 1938, the regiment emblems disappeared from the fuselage sides, leaving only the letter of the squadron and a number of the plane.

In 1935 some aircraft were painted in light gray (not silver) on all bottom surfaces and, in some cases, even the entire plane (e.g., Ab 101, B.71) was painted gray. The three-tone camouflage re-appeared briefly in 1938 when the prototype fighter Avia B 35.1 was painted in brown, green, and ochre with gray lower surfaces. The boundaries between all colors were gradual. The prototype Letov S-50 twin-engine bomber, as well as the SB-2 bombers in service also appeared in a similar color scheme.

One characteristic feature of some squadrons was the color of the propeller spinner and wheel hubs. All planes of the same squadron (same letter) had the same color paint on the spinner and hub, usually yellow, blue, white, light green, or a similar bright color.

Some aircraft were seen with a blank white rectangle on both sides of the fuselage. This indicated that the aircraft was to be assigned to one of the six regiments. After arrival, the regiment emblem would have been painted in the space. In several cases, various large numbers were painted on the bottom and upper surfaces of a wing or on the fuselage. Such markings were used during military exercises.

It is hoped that this brief summary will allow the modeler, artist, and general enthusiast to better appreciate the subtleties of the painting and markings of pre-WWII Czechoslovak military aircraft.□

[Editor's note: The author submitted beautiful drawings of the insignia in full color. Unfortunately, these could not be used in the printed edition of SAFO. It is hoped that the black and white figures made from these colored drawings convey some of the beauty of these colorful Czechoslovak insignia.]

R. Ernst (SAFCH #198), Czech Republic.



Letov SM-1



Aero 12



Letoc S-20



Avia BH-9

Markings of Czechoslovakian Military Aircraft 1919-1939

All photos from the SAFCH archives

The B-25B Mitchell in Brazilian Service

Leif Hellström

Brazil is the largest country in South America and has a proud aviation heritage going way back. Between the wars there was considerable activity establishing military aviation services but the start of World War II still saw Brazil stranded with a wide assortment of largely obsolete aircraft.

Brazil remained neutral for some time and aircraft of the Força Aérea Brasileira (FAB) performed neutrality patrols along the coast. The Brazilian coastline is vast, however, and the FAB had few aircraft suitable to the task. The USA had been but one of several countries supplying aircraft before the war. However, as time went on US influence in Brazil was increasing. The US Government saw Brazil as a potential base for Axis operations in the Americas and was anxious to keep on Brazil's good side. This was the political background to the agreement reached in 1941 to supply a number of early B-25s to Brazil. This was done before the US entry into World War II.

In the autumn of 1941, six North American B-25B Mitchells were sent to Brazil, together with a dozen Curtiss RP-36s and two Douglas B-18s. The B-25s had all seen previous USAAC service, albeit briefly, with the 17th Bombardment Group based at Pendleton in Oregon. Most, if not all, had served with the 89th Reconnaissance Squadron (Medium), assigned to the 17th BG. The Mitchells were delivered to Brazil over a period of several months: 40-2245 in August 1941, 40-2255 in September, 40-2263 in October and 40-2306, -2309 and -2310 in December 1941. At the time of the first deliveries, only 150 or so Mitchells had as yet been produced.

Brazil thus became the first foreign user of the B-25, long before anyone else. The aircraft were officially attached to the US Air Mission in Brazil and were initially operated from Fortaleza in north-eastern Brazil. For some time, the B-25 operations were mainly in the form of operational training for the Brazilian crews unused to high-performance, multi-engine aircraft. To the FAB, the unit was considered a conversion unit known as the Agrupamento de Aviões de Adaptação, formed in January 1942.

The B-25Bs were officially handed over to the FAB in April 1942 and around the same time began flying patrols off the coast of Brazil, using mixed US and Brazilian crews. At this point Brazil was still a neutral. The War of the Atlantic was well under way, although most U-boat operations were further north. The Germans had a shortage of long-range U-boats and therefore asked Italy to send some of its larger boats based in France. Beginning in April 1942, nine different Italian submarines operated off the coats of Brazil for varying periods, attacking a number of ships. On 22 May and again on 27 May 1942, FAB B-25Bs attacked Axis submarines off the north-eastern coast of Brazil, claiming one submarine sunk (incorrectly as it later turned out).

In mid 1942, the B-25Bs were split up, with three each going to the 1º Grupo Misto de Aviação at Natal and the 1º Grupo de Bombardeio Médio at Recife, both of which are at the extreme eastern end of Brazil, some distance south from Fortaleza. Recife was the headquarters of 2ª Zona Aérea of the FAB and quickly become one of the main bases for US air assistance to Brazil, including US Navy aircraft based there. The US support increased after Brazil declared war on Germany and Italy on 31 August 1942, following U-boat attacks on shipping near the Brazilian coast. In 1943, all the B-25Bs were concentrated at Recife with 1º Grupo de Bombardeio. One more attack on a submarine was made on 14 February 1943, but again without result.

The Mitchells were not the most ideal aircraft for patrol missions and from late 1942 they were gradually replaced by Lockheed A-28A Hudsons and other types. The B-25B remained the only true medium bombers of the FAB for some time and continued to see service with units in north-eastern Brazil. The FAB made a number of attempts to acquire B-25Ds to replace the remaining B-25Bs, which were said to be "worn out", but without success. One of the B-25Bs had been lost by August 1943 and a year later only one of the five survivors was airworthy. A single additional B-25B, serial 40-2316, was delivered to the FAB in late 1944 but went directly to a technical training school.

In September 1944, the FAB began receiving 21 brand new B-25Js and these soon became the main equipment of the bomber units. The remaining B-25Bs were all allocated by 1º Grupo Misto de Aviação at Natal, to the north of Recife, by mid 1945.

In the early post-war years the FAB received additional B-25Js and the B-25Bs were relegated to second line use. In July 1952, a single B-25B was listed as assigned to the Recife Depot of 2ª Zona Aérea, together with a motley assortment of other types, and was likely struck off charge soon afterwards, due to the FAB standardization of its aircraft establishment under the MDAP program during 1952. The last B-25Js, on the other hand, lasted until 1974.

On delivery, the B-25Bs were painted in standard USAAC camouflage, i.e. Olive Drab over Neutral Gray. From photos it is clear that the Olive Drab was later touched up with other colours, sometimes resulting in a patchy appearance. Some photos also suggest that black was used as an underside colour on some aircraft, but this is likely just a trick of light and film emulsion, as black undersides had as yet not been introduced by the USAAC in 1941. Markings consisted of Brazilian insignia in a non-standard style, on white circular backgrounds, applied in six positions. The USAAC serial numbers were painted on the fins and rudders, with the last two digits repeated on the nose. The colour was most likely always yellow, although this sometimes looks dark in photos.

From April 1945, the FAB introduced a new, four-digit serialling system for all aircraft. In this, the original B-25Bs were given the serials 5028 to 5033, even though one aircraft had been lost by this time. The technical training B-25B was serialled 5144. The original national insignia were also no doubt replaced by standard ones in due course. There may also have been other variations in paint schemes and markings on the B-25Bs over the course of their FAB service.

Thanks to Dan Hagedorn for providing information for this short piece, written primarily to accompany the photos which were found by chance on eBay. Further information on the B-25 in FAB service can be found in his article in Air Enthusiast no.106, July/August 2003.

Leif Hellström (SAFCH #786).

Captions for the photos on page 74

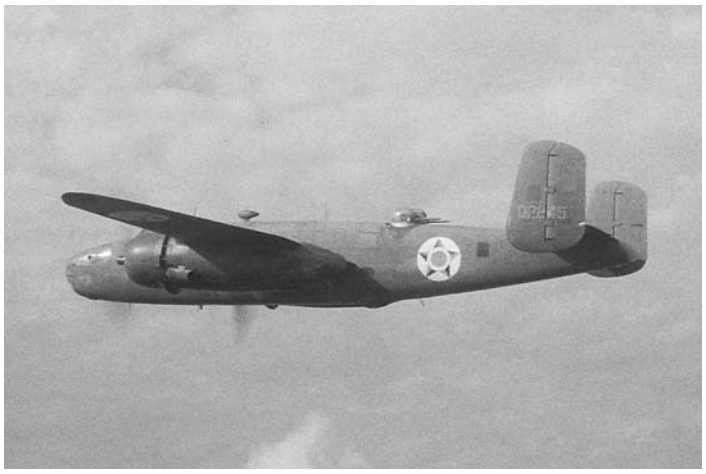
All photos Louis A. Tyler

1-2) Two air-to-air photos of a FAB B-25B, possibly also 40-2245, showing the position of the national insignia to advantage. Note the low contrast between the top and bottom surface camouflage colours.

3) The tail section of 40-2263, another of the early B-25Bs, showing the positioning of the serial on the right-hand side. The photo is unfortunately damaged.

4) Two USAAF mechanics in front of 40-2263 at Recife, some time in 1942-1943. The number “63” on the nose looks very dark, possibly a result of using ortho-cromatic film. Also note the blotched appearance of the camouflage paint.





Two shots of B-25B 40-2245, which was the first B-25B to be delivered to Brazil and thus also the very first B-25 to serve with a foreign air force. The photos are likely from 1942 and taken off the coast of Brazil. Note the slightly non-standard style of Brazilian insignia.



Hungarian Fighter Colours Volume 1 1930-1945, Volume 1, by Denes Bernad & Gyorgy Punka. Published by MMP Books. Catalogue No 9119 Price in UK £ 29.99. Size 300mm x 210mm [A4]

Continuing their policy of enlightening us on the subject of the camouflage and markings of Small Air Forces MMP have arrived at a two volume survey of Hungarian Fighter Colours from 1930 to 1945. And it has been worth waiting for!

The book is in the by-now standard hardback format for MMP, thus ensuring maximum size for photographs and the, as usual, excellent artwork, although I do have to make my standard moan about there being no indication of scale on the colour artwork. There are ways around this for the modeller so I will pass over further comment!!! !

The book commences with a pair of essays by the authors on why they felt this book was necessary and also provides an insight into the constrained lives of historians and modellers before the fall of the Berlin Wall. We just don't realise how lucky we are!

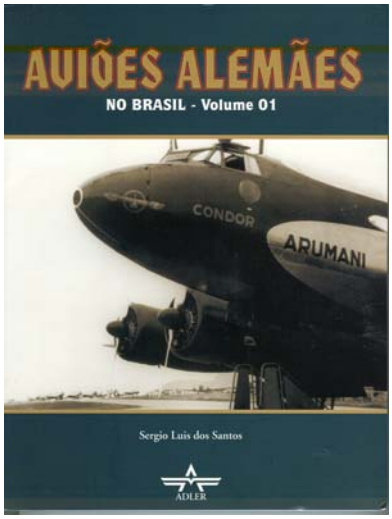
They continue with chapters describing and illustrating the various National Markings and codes carried from 1919 to 1945 - quite a few, .and the actual colours carried on the aircraft again not as straightforward as I for one had initially imagined.

They then go through the fighters in service from 1919 to the mid war period commencing with the Fokker D.XVI, the AVIS series of indigenous designs, via the Fiat CR20, 30, 32, & 42 to the Bf l09D, E, and F . Theses are all illustrated with photographs that I for one have mostly never seen before, complimented by the usual excellent artwork.

The volume finishes with reconstructions of what aircraft served with what unit and various orders of battle up to the end of the war and a glossary of rank equivalents.

Those of us wanting gen on the later Bf l09s, Re2000, Me 210, and Fw 190 must wait for volume 2. The authors have tempted us by including the Table of Contents for Volume 2 within this volume as a trailer!!

For all Eastern European aviation enthusiasts, this is highly recommended. Malcolm Barratt (SAFCH #1716), England.



Aviões Alemães no Brasil – Volume 01, by Sergio Luis dos Santos. 199 A-4 pages.Softbound. Portuguese text. 390 photos. (2012) Published by Adler Editora Ltda., www.adler-books.com.br. E-mail: contato@adler-books.com.br.

In a true “labor of love”, Sergio dos Santos (SAFCH #1202) has collected photographs of all German-designed aircraft that have appeared in Brazilian skies whether or not they had received Brazilian registration or military serials. The genesis of the monumental work is best stated in the Forward to Volume 1 written by Manfred Franzke of Germany:

“In 1993 a young Brazilian called Sergio Luis dos Santos contacted our German publishing house with the idea of a book titled "German aircraft in Brazilian duty". The material he offered was simply excellent and because of the fact that this would have been an unknown matter in the knowledge of German aviation history, the company decided to publish the book in two volumes. A contract was signed in 1995.

“Unfortunately the publishing house was sold in 1998 and the new owner concentrated on another line of publishing themes. So the work of Sergio Luis vanished in the haze. It took the author another ten years to find a publishing house that understood the complexity and quality of the work and eventually found it worthwhile to publish it. The delay of ten years however was not to disadvantage. New and hitherto unknown photos were added and more written facts were discovered. The content grew to three volumes. It is astonishing how the German aviation industry influenced the development of the Brazilian aviation in those days. The exploration of the country was mainly marked by aircraft types like Junkers F-13, G-24 and Ju 52. Not to forget the legendary Dornier Wal. The later epochs were marked by more modern types like Focke Wulf Fw 200 Condor airliners and Dornier Do 26 flying boats. Also the basis of pilot training was on gliders like Grunau 9, Grunau Baby, DFS Kranich and training aircraft like Bu 131 Jungmann, Fw 44 Stieglitz, Klemm L 20 and 25. The Fw 44 Stieglitz and the Fw 58 Weihe were even built under license.”

Volume 1 begins with 62 photos of gliders. This is followed by chapters on Phoenix (photo #63), Raab-Katzenstein (photo #64), Heinkel (photo #75), Bayerische (photos #76-94), Klemm (photo #128), Bücker (photos #129-181), Blohm-Voss (photos #182-187), and Focke-Wulf (photos #260-391). There is also a section of the Brazilian Military Mission to Germany in 1939 (photos #188-259).

All photos are accompanied by captions whose length is commensurate with the importance of the aircraft. The more important manufactures have long sections of explanatory text. However, all the text is in Portuguese.

The great majority of these photos are of aircraft in Brazilian civil registration or of aircraft that retained their German civil or military

registration. Examples of the latter include the He 115 and Ha 139. The only aircraft in Brazilian military service illustrated in Volume 1 are the license-built Fw 44 Stieglitz (photos #261-290) and the Fw 58 Weihe (photos #314-351).

Sergio is to be congratulated on producing a monumental study of a little known aspect of Brazilian aviation history. If you have an interest in Brazilian aviation or more specifically the influence of Nazi Germany on Brazil in the years immediately preceding WW2, I hope you will support Sergio's efforts.

[Editor: A set of photos that caught my attention was of a Navy Fw 58 being towed by a team of oxen after it had crashed in the jungle. Sergio kindly provided a translation of the captions for these photos along with permission to reprint the photos. The photos are on pages 107-108 of the issue of SAFO.]

"On 20 January 1941, the Aeronautics Ministry was created as well as the Força Aérea Brasileira. At that time all planes from Aviação Naval (Navy) and Aviação Militar (Army) where handed over to the newly created Força Aérea Brasileira. The photos show Focke-Wulf F-58, s/n 2-V-8, being recovered from the jungle after it crashed at Boqueirão das Araras close to Fortaleza city, Ceará estate, on 23 September 1941. The photos show the plane still carrying Brazilian Navy marking instead of required FAB markings."



Fokker G-1, **Volume II – Operational History**, by Frits Gerdessen, Karel Kalkman, Cor Oostveen, and Willem Vredeling. 248 A-4 pages. Hardbound. Dutch text with English photo captions. Published by Lanasta, 7812 HJ Emmen, Netherlands. Website: www.lanasta.com. Email: info@lansta.com. ISBN 978-90-8616-121-8. € 37.95 plus postage.

The eagerly-awaited second volume on Fokker's elegant "jacjtkruiser" describes the G-1s service.

Chapter 1: "Vliegen met de G-1" Introduction of the G-1 into service and activities prior to May 1940. (24 pages including 36 photos).

Chapter 2: "De ML en de mobilisatie" Mobilization. [58 pages including 88 photos, 2 maps, one artist's drawing*, and 3 profile drawings (two 2-view drawings & one 3-view drawing)].

Chapter 3: "Oorlog!": The G-1 in combat with the Luftwaffe during the German invasion of May 1940 (58 pages including 85 photos, 7 maps, and 16 artist's drawing.)

Chapter 4: "Capitulatie" (30 pages including 83 photos of the aftermath of the bitter fighting.

Chapter 5: "De G-1 bij de Luftwaffe" The G-1 in Luftwaffe service (36 pages including 65 photos, one map, 1 two-view drawing & 5 profile drawings).

Chapter 6: "Een Duise G-1 Wasp ontsnapt" The story of the G-1 that escaped to England. [8 pages including 8 photos, one map, & one profile drawing (RAF markings].

Chapter 7: "Levensloop" History of each individual G-1 (10 pages including one photo, one artist's drawing, and 2 profile drawings).

Chapter 8: "Wat er overbleef" Remaining relics of the G-1 (4 pages including 14 photos).

Appendices: 14 pages including "Radio G-1 Mercury", "Motoren naar Finland", and "Kleur, camouflage en kentekens" (3 pages including two plan-view drawings.

English Summary" (4 pages including one profile drawing and one artist's drawing).

*The "artist's drawings" refer to color drawings illustrating combat and other operations that were impossible to catch on photos.

If you can read Dutch and have an interest in WW2, this book is a must. The price is very reasonable, but the postage on 3 lb 4 oz (1.44 kg) will add a bit to the total cost. This book is also highly recommended to the non-reader of Dutch who is interested in the early days of WW2 and/or in a beautiful aircraft beautifully described.



L'Aviation Brasilienne durant la Seconde Guerre Mondiale. Ciel de Guerre #22. Editor: Jose Fernandez. 78 A-4 pages softbound. € 14.00 plus postage. Published by Artipresse, 119 rue Anatole France, 93170, Bagnolet, France. Email: airmagazine@rocketmail.com.

The book is divided into three parts: "1ere Partie: Le Chemin vers la Guerre" (12 pages) covers the beginnings of Brazilian Naval and Army aviation and their uniting as the Força Aérea Brasileira in 1941. This section includes 22 photos and 3 color profile drawings. "2eme Parrtie: Les Opérations sur le Littoral Brésilien" (25 pages) describes the activities of US and Brazilian aviation units in combating Nazi U-Boats off the coast of Brazil. This section includes details maps of several of the more successful attacks and 34 photos and 29 color profile drawings. The remaining section of the book (40 pages), titled "Les Opérations en Italie", describes the Brazilian contribution to the Italian Campaign in WW2. It begins with three pages on the use of their Piper Cubs (2 photos & 3 color profiles). The remainder is devoted to the P-47D Thunderbolts with 67 photos and 19 color profiles.

The modeler will drool over the 59 beautiful color profiles – almost all available as kits: [Boeing P-12 (4); North American BT-9*, AT-6 (3), & B-25 (4); Vultee BT-15, V-11, & A-31 Vengeance;

Fairchild PT-19; Douglas C-47, B-18 (2), & A-20K; Focke Wulf Fw 58 (4); Curtiss P-36 (4), & P-40N (2); Lockheed Hudson & PV-1 Ventura (4); Consolidated PBY; Noorduyn Norseman; Piper L-4 Cub (3); and Republic P-47D (19)]. Several of these color drawings consist of multi-views [Fw 58, Vengeance, and P-47D (2)].

* Dan Hagedorn points out that the 'BT-9' was actually a NA-46 that was given the FAB designation 'BT-9' after 1941.

L'Aviation Brasilienne durant la Seconde Guerre Mondiale is highly recommended to all enthusiasts interested in military aviation in Latin America. In particular, the modeler will be inspired by the multitude of unusual markings and color schemes that can be applied to familiar aircraft types.

[Editor: You can find a couple of short articles on the Brazilian B-25 elsewhere in this issue of SAFO.]



Histoires d'Avions; Volume 1: Dewoitine 520, Morane 406, Potez 631; 1939-1940, by Matthieu Comas and Yann Le Gal. Hore-Série Avions No.34. 79 A-4 pages, 100 photos, 35 color profile drawings, soft cover. (2013) €14.50. Lela Presse: E-mail: contact@avions-bateaux.com. Website: www. avions-bateaux.com.

This book is unique; at least it is in my experience. The subtitle, "Des Hommes, Des Avions, Des Couleurs", explains that it presents the history of individual aircraft with text, photos, and color profile drawings.

The book begins with a 4-page "Introduction" followed by the 6-page "Camouflage: Styles et tendances" where the camouflage of each of the title aircraft types is discussed. Of particular interest is the discussion of the different camouflage applied to the MS 406 produced by different companies while identifying the range of s/n of the MS 406 built by each company.

The rest of the book is devoted to individual aircraft with a history of its operations, several photos, and one or more full-page color profile drawings. The D 520 is represented by 6 profiles, the MS 406 by 19 profiles, and the Potez 631 by 10 profiles. An example of each follows: "Triplette nocturne Potez 631 n° 71, 98 et 109" 2 pages of text including 3 photos and 2 pages with 3 color profile drawings. "À la chasse MS 406 n° 837 au crocodile" 2 pages including 2 photos and one color profile drawing. "Le lévrier de Rethondes D 520 n° 215" 2 pages including 3 photos and one color profile drawing.

This book will of interest to the historian, illustrator, and modeler specializing in French aircraft during the Battle of France. The review copy is available from the SAFCH Sales Service safo@redshift.com for $15.00 plus p&p, or directly from the publisher at the contact@avions-bateaux.com.



Les 60 Ans de la Patrouille de France, by Sébastien Guillemin, Jean-Louis Gaynecoetche, and Humbert Charve. Hore-Série Avions No.35. 128 A-4 pages, 180 photos, 52 color profile drawings, softcover. (2013) €17.50. Lela Presse: E-mail: contact@avions-bateaux.com. Website: www. avions-bateaux.com.

This is a book that will appeal to both the student of acrobatic teams and to the modeler who likes colorful aircraft. French acrobatic teams are covered from the Flying School Morane parasol monoplanes of 1931 to the Patrouille de France's Alpha Jets of 2013. The chapters are:

1. La patrouílle d'Étampes: 9 pages including 29 photos and 5 color profile drawings [MS.230 (1), MS.225 (2), & Stampe SV-4C (1)].

2. Les patrouílle d'escadre: 5 pages including 12 photos and 4 color profile drawings [Vampire 5 (2), F-84G (1), & Mystére IV].

3. La Patrouille de France sur Ouragan: 13 pages including 39 photos and 6 color profiles.

4. La Patrouille de France sur Mystére IV: 21 pages including 58 photos and 3 color profile drawings.

5. L'ére due Fouga: (a) La patrouille de l'École de l'Air: 11 pages including 31 photos. (b) La Patrouille de France: 56 pages including 105 photos and 10 color profile drawings. (c) Rencontres de couleurs: 4 pages including 15 photos of visiting aerobatic-team aircraft.

6. L'Alpha jet et la Patrouille de France: 21 pages including 84 photos and one color profile drawing.

7. Les avions d'accompagnement: 5 pages including 15 photos and 5 color profile drawings [MD.312 (1), C-47 (2), & Noratlas (2)].

The French text is supported by copious well-reproduced photos, and beautiful color profile drawings. The modeler will particularly appreciate that the profile drawings are accompanied by upper and lower plan-view drawings.

Avion's Hors-serie is highly recommended to all enthusiasts of aerobatic teams and their aircraft.

The review copy is available from the SAFCH Sales Service safo@redshift.com for $18.00 plus p&p, or directly from the publisher at contact@avions-bateaux.com.

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"I have a few observations on SAFO issues #145 and #146. For #145: Gerard Terry is not alone in not having a clue what his photo depicts. The cantilever wing and the large inline engine gives it a vaguely early Dornier look but I am more than happy to await wiser counsel!

"Santiago A. Flores has come up with some truly interesting information and photos of Mexican Air Force aircraft; a subject not exactly well known on this side of the Atlantic. An interesting point about the Bristol F2Bs is that they seem to be without the rear gun ring mountings - so would they have been for training/transport use? From the rudder shape I would guess they are Mark IV's

"Bristol Boarhounds are not exactly well known anywhere and a quick check on various websites reveal that if they did carry numbers, then they were always photographed with someone in front of the number Can someone please produce a 1/48 kit of a Vought Corsair!

"The late Frans Scheve's article on Gazelle F-GEHC was most interesting. I believe one of our TV programmes featured the Chateau with the racing circuit. I can confirm the continued existence of F-GEHC as G-OGEO; I checked the CAA website a couple of days ago and it is now registered to a company in Scotland.

"The North Korean AF story continues to turn up little gems of information and the Hercules bomber story is totally new to me- someone is bound to make a model of it.

"I have included a copy of a print taken from one of my own slides depicting the one and only Isle of Man [Manx] Air Force's Reims F172 G-ASZW in Hangar 2 at Coventry Airport in July 1978. This was at the time believed to be a practical joke played on the then owner, but this can be discounted as it was then owned by Luton Flying Club. Because of the lighting conditions the colour has degraded from a true RAF Green and Medium Sea Grey approximation. The aircraft is alive and well and currently registered G-ENOR.

"For those who don't know, the Isle of Man is part of the UK but due to various ancient Acts of Parliament it retains its own coinage and Parliament (the Tynwald), and is an offshore tax haven now having it's own International Registration code letter 'M' generally seen on Biz-Jets and above! They also have their own language related to their Viking roots."
Malcolm Barratt (SAFCH #1716), UK.



"For #146: Santiago Flores continues to make deep inroads into our ignorance of Mexican Aviation, and Ted Koppel should be reassured that applying the Mexican triangles in reverse would probably have been a genuine mistake. After all the Mexican Air Force would have been a totally unknown subject down in Bristol. Rest assured however, the big boys get it wrong too. I have a photo copy of the 1943 service manual for the C-47, and on the page dealing with the finish of the aircraft, the star is. up side down!

"The Avia-Fokker F IX article will find it's way to the original magazine (if I can locate it)! The only place I could see a fixed forward firing gun being placed would be on the large plate protruding under the cockpit window on the port side, the device beneath it could be the end of a reduction gear. I don't mean the venturi next to the serial number as on the front cover.

"Iranian Aviation Review was sold for a while over here, but when it didn't appear after #6 I wrongly assumed it had ceased trading. I shall check it out again. And, I do agree some of the pictures are way too small."
Malcolm Barratt (SAFCH #1716), England.

"Issue #145 is another exceptional SAFO issue. I really enjoyed the Hercules vs. Hercules article; I've never seen it referenced before. Doug. Dildy's continuation of the NKPAF was, again, impressive and shows the great amount of research he's put into this series. Hopefully, he'll have it published in book form one of these days. As for the 'Information Wanted' photo, of course it's a Loening design. I don't know which one since he had so many."
Joe Furst (SAFCH #376), USA.

"I just received the latest issue of SAFO (#146), and I would like to add some comments about Tim Callaway's 'Mosquitoes Abroad' article. I've recently finished writing a book about Brazilian mercenary pilots in the Dominican Republic from 1948 to 1950 and the attempt to bomb Venezuela by Brazilian commercial airline pilots. I would like to correct the information that the Dominican Mosquitoes and Beaufighters participated in the attack on rebel forces at Luperon. The only two fighters that participated in this event were P-51D, serial 405, piloted by Milton Ajuz and P-51C, serial 401, piloted by Carlos Alberto de Freitas Guimarães, both Brazilian mercenaries. It seems that the P-51s arrived on the morning after the invasion with the rebel PBY already grounded on a sandbank. The P-51C attacked the Catalina, but it was finally destroyed by a gunboat (Dominican navy serial GC-9).

"According to Mr. Ajuz, the Mosquitoes and Beaufighters flew very rarely due to the total disinterest of the British advisers who preferred to stay drunk rather than instruct the Dominican pilots."
Hélio Higuchi (SAFCH #1511), Brazil.

"One remark concerning the 'Spanish Boeing' article in issue #146: An article by Peter Bowers in Aerofax Minigraph 8 has a photo that allegedly shows the second Model 281 demonstrator with a very dark (black?) high-gloss finish on the fuselage, light coloured (yellow?) wings and tail planes, and a tapering fuselage flash (could be only a white border?)."
Nils Treichel (SAFCH #1467), Germany.



Photo #335: 2-V-8 in front of Aviação Naval´s hangars before its crash in 1941. (Cláudio Lamas de Farias)



Photo #340: Fw 58 coded 2-V-8 crashed at Boqueirão das Araras, next to Fortaleza, Ceará, on 23 September 1941. (Diretoria do Patrimônio e Documentação da Marinha)



Photo #341: From this angle we can see the damage on the left wing. (Diretoria do Patrimônio e Documentação da Marinha)



Photo #342: This photo of 2-V-8 tail is very interesting since it shows the inscription "built at Fábrica do Galeão Rio de Janeiro". (Antônio Pereira Linhares)



Photo #345: With the help from a team of oxen, the plane is removed. (Diretoria do Patrimônio e Documentação da Marinha)



Photo #346: Notice the canvas protection on the cockpit, engines, and propellers. Also note the small '8' on the protective cover of the gun sight on the nose. (Antônio Pereira Linhares)

Photos from the book *Aviões Alemães no Brasil – Vol. 1*. See review on page 103.